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**Catalog of the Asteroid Type-Specimens and
Fisher Voucher Specimens at the
California Academy of Sciences**

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Catalog of the Asteroid Type-Specimens and Fisher Voucher Specimens at the California Academy of Sciences

Chet Chaffee¹ and Barbara Weitbrecht

INTRODUCTION

The Recent invertebrate type collection of the Department of Invertebrate Zoology, California Academy of Sciences, originated in 1960 (Smith 1964). A general catalog of type specimens (Stasek 1966a) was supplemented by catalogs of type specimens of selenogasters (Stasek 1966b), cephalopods (Smith 1974), and ostracods (Cohen and Chivers 1976). Some type specimens of Recent invertebrates were also held by the Department of Geology, which published catalogs of its type and voucher holdings of Recent and fossil cephalopods (Zullo and Hertlein 1970), echinoderms (Zullo and Hertlein 1972) and brachiopods (Roth 1972). Since these catalogs were published the acquisition of new material and the transfer of Recent invertebrate type holdings from the Geology to the Invertebrate Zoology Department (Dunn 1981) have substantially enlarged the type collection, necessitating the publication of new type catalogs.

The Recent invertebrate type collections have grown not only through normal collection growth, but also through the acquisition of holdings of other institutions and the discovery of previously unrecognized type-specimens in the general collection. The systematics collections of Stanford University and its Hopkins Marine Station were permanently loaned to the California Academy of Sciences between 1964 and 1974. The catalog of the Stanford paleontological type holdings (Smith 1978) thus includes many Recent molluscan types now held by CAS-IZ. At the time of its acquisition the Hopkins Marine Station collection contained many type-specimens, not all of which were properly labeled. Consequently much of the type material acquired from Hopkins in 1964 was unrecognized and not included by Stasek (1966a). Unrecognized and unmarked type material was placed in the general collection and remained there until 1975, when an exhaustive search to identify this material was ini-

tiated by Welton L. Lee. Among the Asteroidea, the subject of this catalog, over 430 type-specimen lots were located.

Most of the asteroid type-specimens in the CAS-IZ collection represent species described by Dr. Walter Kenrick Fisher between 1905 and 1940. Fisher described many taxa, mostly sea stars, while a graduate student and later Professor of Biology at Hopkins Marine Station. Much of his work was done before clear procedures for designation of type material had been established. Many of Fisher's type-specimens remained unrecognized in the general and teaching collections of the Hopkins Marine Station.

Fisher's use of various curatorial and nomenclatural procedures over the years made it difficult for us to determine the status of some of the specimens found in the general collection. We used three criteria to recognize type material: (1) the specimens must have been designated in accordance with the International Rules of Zoological Nomenclature; (2) the status of the specimens in the CAS-IZ collections must be compatible with that of type-specimens at the U. S. National Museum of Natural History (USNM); and (3) information on specimen labels regarding type status and/or specimen identification must be in W. K. Fisher's handwriting. In some cases the specimen label clearly indicates that Fisher considered the specimen to be a holotype, paratype or syntype. When unambiguous information was absent, we made judgments on the available evidence. When Fisher clearly used a single specimen for the description, that specimen is considered to be the holotype. When the original description is based on more than one specimen, all specimens in the series are considered to be syntypes. When type specimens were designated in subsequent publications, the specimens are considered to be lectotypes, unless that conflicts with information Fisher wrote on the specimen label.

Paratypes and paralectotypes in this catalog are specimens other than the holotype or lectotype that are cited in or used to contribute to the original description. Voucher specimens, sometimes known as hypotypes

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or plesiotypes, are specimens other than types that are figured or discussed in Fisher's publications. Although these specimens lack nomenclatural status, they are potentially important to asteroid systematics. Where Fisher designated only a holotype or no type specimen at all, such auxilliary specimens are important for evaluating his concept of the species.

This catalog lists all primary and secondary type-specimens of the class Asteroidea, as well as voucher specimens from the works of W. K. Fisher, currently held by CAS-IZ. Taxa are listed alphabetically by species. The citation format is as follows:

species, Genus Author, date citation of original description

CAS TYPES: CAS catalog number (number of specimens, [preservative]) (other catalog numbers) Location [notes]

USNM TYPES: USNM catalog number (number of specimens, preservative) Location

The format for vouchers is as follows:

species, Genus Author, date (name as cited); Fisher, date citation of work for which specimen is a voucher

CAS VOUCHERS: CAS catalog number (number of specimens, [preservative]) (other catalog numbers) Location [notes]

Specimens are preserved in 70% EtOH unless otherwise stated. "Other catalog numbers" are those under which a specimen has been published or previously cataloged. Those prefixed by IZ are discontinued CAS-IZ Type Series numbers, used in the Stasek (1966a) catalog. Numbers prefixed with "SU" are Stanford University numbers.

Most specimens were collected by the U. S. Fisheries Commission Steamer "Albatross." Unspecified station numbers in the text are "Albatross" numbers; complete locality data for stations cited are provided in Appendix I. The localities of "Discovery" Expedition material are likewise cited in the text only as station numbers, with complete locality descriptions provided in Appendix II. Collection data for specimens from other sources are given in the text of the catalog in the following format:

GENERAL LOCALITY: more specific locality, collector's name, collection date.

For many taxa, a section listing all other known type specimens of the taxon and their repositories follows the listing of type material held at CAS. Voucher specimens held at other institutions are not listed.

Throughout the text the following abbreviations are used: CAS—Department of Invertebrate Zoology, California Academy of Sciences, San Francisco, California; MCZ—Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts; USNM—United States National Museum of Natural History, Washington, D.C.

ACKNOWLEDGMENTS

We are greatly indebted to the many people of the Department of Invertebrate Zoology, California Academy of Sciences, who assisted us with aspects of this project. We especially thank Dusty Chivers, Dalene Drake, and Phoebe Grigg for their continued assistance. Special thanks to Welton Lee, David Lindberg, and Daphne Fautin for their support, guidance, and friendship during this project. Their helpful suggestions have been a source of improvement for both the manuscript and the authors.

Tomio Iwamoto and William Eschmeyer of the Department of Ichthyology, CAS, provided much assistance in putting the manuscript into publishable form and generously provided many hours of time on the Ichthyology Department word processor. The Hanna Publication Fund, Department of Geology, assisted with the purchase of floppy disks and other secretarial supplies.

We would also like to thank Maureen Downey and David Pawson of the U. S. National Museum for access to the type collections in their department, and especially Maureen Downey for her continued assistance with many of the difficult decisions regarding the status of the type asteroids. Without her help this catalog could not have been completed. Thanks also to William Emerson and Harold Feinberg of the American Museum of Natural History for their assistance in tracking down types in their collections.

CATALOG

acanthiuis, Bythiolophus Fisher, 1916 Proc. Biol. Soc. Wash. 29: 31.

CAS HOLOTYPE: 018418 (2 fragmented rays) (IZ 112) Sta. 5648
USNM HOLOTYPE: 37011 (1) Sta. 5648

acanthogenys, Brisinga Fisher, 1916 Proc. Biol. Soc. Wash. 29: 33.

CAS HOLOTYPE: 002874 (2 rays) Sta. 5440
USNM HOLOTYPE: 37023 (1) Sta. 5440

aciculosis, Acantharchaster Fisher, 1910b Zool. Anz. 35: 550.

CAS PARATYPES: 008488 (1) Sta. 4405; 018388 (1) (IZ 110) Sta. 4402 [2 rays slightly broken]; 021376 (fragment) (IZ 109) Sta. 4353 [small part of a bactinal wall]; 021381 (1) (IZ 109) Sta. 4335 [distal part of rays broken]; 021382 (1) (IZ 109) Sta. 4400
USNM HOLOTYPE: 27799 (1) Sta. 4402 **PARATYPES:** 31562 (3) Sta. 3070; 31563 (12) Sta. 4402; 31564 (2) Sta. 2980; 31565 (1) Sta. 4405; 31566 (1) Sta. 4421; 31567 (14) Sta. 3347; 31568 (25) Sta. 3343; 31569 (7) Sta. 4353; 31570 (5) Sta. 4400; 31571 (1) Sta. 4398; 31572 (1) Sta. 4352; 31574 (1) Sta. 3070; 31575 (1) Sta. 3343; 31576 (12) Sta. 3347; 31718 (2) Sta. 2871; 31719 (4) Sta. 2980; 31720 (1) Sta. 2923; 31721 (1) Sta. 3073; 31722 (1) Sta. 3670; 31864 (3) Sta. 4407; 32148 (3) Sta. 3338; 32149 (1) Sta. 4381

actinocles, Zoroaster Fisher, 1919a Ann. Mag. Nat. Hist., ser. 9, 3: 390.

- CAS HOLOTYPE: 018416** (1 ray) (IZ 177) Sta. 4765
USNM HOLOTYPE: 37039 (1) Sta. 4765
- aequalis, Leptasterias* (Stimpson, 1862); Fisher, 1930
 Bull. U. S. Nat. Mus. 76(3): 120.
CAS VOUCHERS: 008609 (11) CALIFORNIA: Monterey Bay, Pacific Grove, 1908; **008611** (3) CALIFORNIA: Monterey Bay, Pacific Grove, 29 Dec 1890; **008612** (7) CALIFORNIA: Monterey Bay, Pacific Grove, F. W. Weymouth coll. Jan 1910; **008629** (several, dry) CALIFORNIA: Monterey Bay, Cypress Point [many disintegrated, original number not determinable]
- aequalis, Mediaster* Stimpson, 1857; Fisher, 1911a
 Bull. U. S. Nat. Mus. 76(1): 198.
CAS VOUCHERS: 008503 (3) Sta. 3068; **008504** (2) Sta. 3068; **008505** (1) Sta. 3663; **008506** (2) Sta. 3664; **008507** (2) Sta. 3665; **008508** (2) Sta. 4281; **008509** (1) Sta. 4343; **008510** (2) Sta. 4431
- alascensis, Pseudarchaster* Fisher, 1905 Bull. Bur. Fish. 24 (for 1904): 303.
CAS PARATYPES: 002862 (1) Sta. 4201; **008528** (1) Sta. 2860
USNM HOLOTYPE: 22334 (1) Sta. 4236
- alberti, Brisanga* Fisher, 1906b. Bull. U. S. Fish. Comm. 23 (for 1903): 1111.
CAS PARATYPE: 002875 (1) Sta. 4177 [partly fragmented]
USNM HOLOTYPE: 21192 (1) Sta. 4177. **PARATYPE: 31877** (1) Sta. 4177
- almus, Trophodiscus* Fisher, 1917d Proc. U. S. Nat. Mus. 52: 368.
CAS PARATYPE: 021375 (1, dry) Sta. 3646 [juvenile from back of cotype]
- alternatus, Heterozonias* (Fisher, 1906); Fisher, 1911a
 Bull. U. S. Nat. Mus. 76(1): 331.
CAS VOUCHERS: 008544 (1) Sta. 4307; **008545** (1) Sta. 4400
 forma *alveolata, Evasterias troschelii* (Verrill, 1914); Fisher, 1930
 Bull. U. S. Nat. Mus. 76(3): 139.
CAS VOUCHER: 008613 (25) ALASKA: Orca, A. W. Greeley coll. Jul 1896
- amurensis, Asterias* Lütken, 1871; Fisher, 1930
 Bull. U. S. Nat. Mus. 76(3): 6.
CAS VOUCHERS: 008614 (25) Sta. 3243; **008618** (1) KAMCHATKA: Petropavlovsk, 19 Jun 1906
- anacanthus, Ateloria* Fisher, 1911b Proc. U. S. Nat. Mus. 40: 424.
CAS HOLOTYPE: 018419 (fragment of abactinal wall) (IZ 139) Sta. 5655
USNM HOLOTYPE: 28659 (1) Sta. 5655. **PARATYPE: 40588** (1) Sta. 5460
- analoga, Craterobrisanga* Fisher, 1919b Bull. U. S. Nat. Mus. 100(3): 516.
CAS HOLOTYPE: 018423 (1 ray) (IZ 134) Sta. 5348
USNM HOLOTYPE: 37034 (1) Sta. 5348
- analogus, Leiaster* Fisher, 1913c Proc. U. S. Nat. Mus. 46: 215.
CAS PARATYPE: 002831 (1) Sta. 5165 [2 rays broken]
USNM HOLOTYPE: 32640 (1) Sta. 5165. **PARATYPES: 40034** (1, dry) Sta. 5165; **40575** (1) Sta. 5165
- analogus, Prionaster* Fisher, 1913b Proc. U. S. Nat. Mus. 43: 602.
CAS PARATYPE: 008475 (1) Sta. 5565
USNM HOLOTYPE: 30507 (1) Sta. 5123. **PARATYPES: 40156** (1) Sta. 5537; **40157** (1) Sta. 5565; **40811** (1) Sta. 5541
- anchista, Brisigenes* Fisher, 1919b Bull. U. S. Nat. Mus. 100(3): 521.
CAS HOLOTYPE: 002866 (5 rays) Sta. 5648
USNM HOLOTYPE: 37003 (1) Sta. 5648
- anchistus, Persephonaster* Fisher, 1913b Proc. U. S. Nat. Mus. 43: 614.
CAS PARATYPE: 008466 (1) Sta. 5116
USNM HOLOTYPE: 30521 (1) Sta. 5301. **PARATYPE: 40128** (1) Sta. 5111
- annectens, Henricia leviuscula* Fisher, 1910; Fisher, 1911a
 Bull. U. S. Nat. Mus. 76(1): 291.
CAS VOUCHER: 008565 (1) Sta. 4441
- annulatus, Labidiaster Sladen, 1889*; Fisher, 1940
 Discovery Rept. 20: 219.
CAS VOUCHER: 029410 (1 ray) "Discovery II" Sta. 160
- anomala, Asterias amurensis* (Verrill, 1914); Fisher, 1930
 Bull. U. S. Nat. Mus. 76(3): 19.
CAS VOUCHERS: 008726 (1) Sta. 3233; **008727** (1) Sta. 3231
- antarctica, Anasterias* (Lütken, 1856); Fisher, 1940
 Discovery Rept. 20: 233.
CAS VOUCHERS: 029411 (1) "Discovery II" Sta. 755; **029412** (1) "Discovery II" Sta. 724; **029413** (1) "William Scoresby" Sta. 841
- antarcticus, Myroraster* (Koehler, 1912); Fisher, 1940
 Discovery Rept. 20: 181.
CAS VOUCHER: 029415 (1) "Discovery II" Sta. 148 [partly dissected]
- arcystata, Henricia* Fisher, 1917b; Fisher, 1919b
 Bull. U. S. Nat. Mus. 100(3): 439.
CAS VOUCHER: 008555 (1) Sta. 5219
- arthrocneuis, Nymphaster* Fisher, 1913b Proc. U. S. Nat. Mus. 43: 638.
CAS PARATYPE: 008516 (1) Sta. 5651
USNM HOLOTYPE: 30547 (1) Sta. 5648. **PARATYPE: 40595** (1) Sta. 5651
- asiaticus, Goniopecten* Fisher, 1913b Proc. U. S. Nat. Mus. 43: 601.
CAS HOLOTYPE: 018389 (1 ray) (IZ 141) Sta. 5121 [part of abactinal wall missing]
USNM HOLOTYPE: 30506 (1) Sta. 5121
- asthenactis, Henricia* Fisher, 1910c Zool. Anz. 35: 572. Designated in Fisher, 1911; Bull. U. S. Nat. Mus. 76(1): 297.
CAS PARALECTOTYPE: 008556 (1) Sta. 4772
USNM LECTOTYPE: USNM 27782 (1) Sta. 4423
- astropectinides, Ctenopleura* Fisher, 1919b Bull. U. S. Nat. Mus. 100(3): 91.
CAS PARATYPE: 002839 (1) Sta. 5392 [2 rays broken]
USNM HOLOTYPE: 30515 (1) Sta. 5520. **PARATYPE: 40312** (1) Sta. 5392
- atopus, Nymphaster* Fisher, 1913b Proc. U. S. Nat. Mus. 43: 640.
CAS PARATYPE: 008517 (1) Sta. 5428
USNM HOLOTYPE: 30550 (1) Sta. 5428. **PARATYPE: 40598** (1) Sta. 5428
- attenuatus, Psilaster* Fisher, 1906b Bull. U. S. Fish. Comm. 23 (for 1903): 1019.
CAS PARATYPES: 008469 (3) Sta. 3867; **008470** (2) Sta. 3908; **008471** (2) Sta. 3916; **018422** (8) Sta. 3865; **018834** (2) Sta. 3883;

- 018835** (1) Sta. 4090; **018836** (2) Sta. 4096; **018837** (1) Sta. 3918; **018838** (1) Sta. 3917
- USNM HOLOTYPE: 21149** (1) Sta. 4095. **PARATYPES: 31303** (20) Sta. 4096; **31310** (1) Sta. 3917; **31311** (2) Sta. 3918; **31349** (6) Sta. 4088; **31363** (2) Sta. 3866; **31364** (5) Sta. 3867; **31365** (2) Sta. 4095; **31366** (22) Sta. 3883; **31368** (2) Sta. 3911; **31369** (1) Sta. 4086; **31372** (2) Sta. 3867; **31373** (1) Sta. 3884; **31374** (2) Sta. 4095; **31383** (1) Sta. 3916; **31384** (1) Sta. 4089; **31385** (2) Sta. 3909; **31386** (2) Sta. 3918; **31387** (1) Sta. 3917; **31388** (50) Sta. 3865; **31389** (2) Sta. 3910; **31390** (1) Sta. 3911; **31415** (1) Sta. 4086; **31416** (3) Sta. 4087; **31602** (7) Sta. 3917; **E9100** (38, dry) Sta. 3865
- aulophora*, *Anthosticta* Fisher, 1911b Proc. U. S. Nat. Mus. 40: 417.
CAS HOLOTYPE: 018420 (1 ray) (IZ 130) Sta. 5420
USNM HOLOTYPE: 28656 (1) Sta. 5420
- avicularia*, *Luidia* Fisher, 1913c Proc. U. S. Nat. Mus. 46: 203.
CAS HOLOTYPE: 018404 (1) (IZ 142) Sta. 5391
USNM HOLOTYPE: 32624 (1) Sta. 5391
- forma *biordinata*, *Orthasterias koehleri* Verrill, 1914: Fisher, 1928 Bull. U. S. Nat. Mus. 76(1): 146.
CAS VOUCHER: 008730 (1, dry) BRITISH COLUMBIA: Port Renfrew
- borealis*, *Dipsacaster* Fisher, 1910b Zool. Anz. 35: 546.
CAS PARATYPE: 029394 (1) Sta. 3331
USNM PARATYPES: 32088 (3) Sta. 3331; **32089** (1) Sta. 3330; **32090** (1) Sta. 3337; **33277** (1) Sta. 3489; **33351** (1) Sta. 3500
- borealis*, *Solaster* (Fisher, 1906): Fisher, 1911a Bull. U. S. Nat. Mus. 76(1): 320.
CAS VOUCHERS: 008540 (1) Sta. 4528; **031017** (1) Sta. 5050
- bowersi*, *Nereidaster* Fisher, 1906b Bull. U. S. Fish. Comm. 23 (for 1903): 1049.
CAS PARATYPE: 002858 (1) Sta. 4132 [abactinal surface partly dissected]
USNM HOLOTYPE: 21161 (1) Sta. 4134
- brandti*, *Diplasterias* (Bell, 1881): Fisher, 1940 Discovery Rept. 20: 249.
CAS VOUCHER: 031131 (1) "William Scoresby" Sta. 98
- brevispinus*, *Acanthaster* Fisher, 1917b Proc. Biol. Soc. Wash. 30: 92.
CAS PARATYPE: 008583 (1) Sta. 5149
USNM HOLOTYPE: 37027 (1) Sta. 5149
- brevispinus*, *Persephonaster euryactis* Fisher, 1919b Bull. U. S. Nat. Mus. 100(3): 115.
CAS PARATYPE: 002846 (1) Sta. 5289
USNM HOLOTYPE: 37002 (1) Sta. 5289. **PARATYPES: 40169** (1) Sta. 5289; **40170** (1) Sta. 5290; **40171** (1) Sta. 5365; **40540** (1) Sta. 5550
- forma *brevispinus*, *Pisaster brevispinus* (Stimpson, 1857): Fisher, 1930 Bull. U. S. Nat. Mus. 76(3): 181.
CAS VOUCHER: 029395 (1, dry) CALIFORNIA: San Francisco Bay, USFC Str. "Albatross" coll. 20 Mar 1912
- brucei*, *Diplasterias* (Koehler, 1908): Fisher, 1940 Discovery Rept. 20: 253.
CAS VOUCHER: 029417 (1 ray) "Discovery II" Sta. 148
- californica*, *Hippasteria* Fisher, 1905 Bull. Bur. Fish. 24 (for 1904): 310.
CAS PARATYPES: 002856 (1) Sta. 4429; **002857** (1) Sta. 4429 [with parasitic barnacle and partly dissected abactinal surface]; **008502** (1) Sta. 4427
USNM HOLOTYPE: 22339 (1) Sta. 4429. **PARATYPES: 32110** (1) Sta. 2892; **32111** (1, dry) Sta. 2896; **32112** (1, dry) Sta. 2948; **32113** (1, dry) Sta. 2980; **32114** (1, dry) Sta. 3104; **32115** (1, dry) Sta. 3112; **32116** (1, dry) Sta. 3344; **32117** (1, dry) Sta. 3186; **32118** (2, dry) Sta. 4427; **32119** (1, dry) Sta. 3348; **32120** (1, dry) Sta. 4430; **32121** (1, dry) Sta. 4530; **33324** (1, dry) Sta. 4345; **33328** (1, dry) Sta. 3071; **33354** (1, dry) Sta. 2892; **33355** (1, dry) Sta. 2948
- californicus*, *Astropecten* Fisher, 1906c Zool. Anz. 30: 299.
CAS HOLOTYPE: 018424 (1) (IZ 106) CALIFORNIA: Monterey Bay, M. H. Spaulding coll. **PARATYPES: 008652** (26) Sta. 4420; **008653** (1) Sta. 3127; **008655** (1) Sta. 4550; **008656** (1) Sta. 4557; **008657** (1) Sta. 4559; **008658** (1) Sta. 4562; **018426** (3) (IZ 107) CALIFORNIA: Monterey Bay, M. H. Spaulding coll. [original label: "Cotype"]
- californicus*, *Rathbunaster* Fisher, 1906a Proc. Wash. Acad. Sci. 8: 137.
CAS PARATYPE: 008635 (12) Sta. 2925
USNM HOLOTYPE: 21934 (1) Sta. 2925. **PARATYPES: E1161** (1) Sta. 2925; **E1162** (2) Sta. 2925
- californicus*, *Rathbunaster* Fisher, 1906a: Fisher, 1928 Bull. U. S. Nat. Mus. 76(2): 89.
CAS VOUCHERS: 008710 (1) Sta. 3349; **008711** (1 arm) Sta. 3350; **008712** (22) Sta. 2892; **008713** (2) Sta. 4341; **008714** (6) Sta. 3186; **008715** (8) Sta. 3186; **008716** (2) Sta. 2927; **008717** (9) Sta. 4339; **008718** (3) Sta. 4340; **009800** (19) Sta. 4363
- calliplus*, *Leiaster* Fisher, 1906b Bull. U. S. Fish. Comm. 23 (for 1903): 1083.
CAS PARATYPES: 002832 (1) Sta. 4164; **002833** (1) Sta. 3872 [2 rays missing]
USNM HOLOTYPE: 21179 (1) Sta. 4149. **PARATYPES: 31312** (1) Sta. 3872; **31313** (1) Sta. 3875; **31314** (2) Sta. 4128
- callistus*, *Astropecten* Fisher, 1906b Bull. U. S. Fish. Comm. 23 (for 1903): 1012.
CAS PARATYPES: 008659 (1) Sta. 3835; **008660** (1) Sta. 3957; **008661** (2) Sta. 4080
USNM HOLOTYPE: 21146 (1) Sta. 4079. **PARATYPES: 21146** (1) Sta. 4079; **31417** (6) Sta. 4079; **31418** (3) Sta. 3810; **31419** (4) Sta. 3835; **31420** (1) Sta. 3957; **31422** (1) Sta. 4080; **31808** (6) Sta. 4045; **31809** (1) Sta. 4044; **E4304** (1) Sta. 4079; **31810** (3) Sta. 4144
- callosus*, *Echinaster* von Marenzeller, 1910: Fisher, 1919b Bull. U. S. Nat. Mus. 100(3): 428
CAS VOUCHER: 008604 (1) PHILIPPINES: Balayan Bay, Ligo Point, USFC Str. "Albatross" coll. 18 Jan 1908
- capitatus*, *Pisaster giganteus* (Stimpson, 1862): Fisher, 1930 Bull. U. S. Nat. Mus. 76(3): 177.
CAS VOUCHERS: 008624 (3) CALIFORNIA: San Diego; **008625** (1) CALIFORNIA: Laguna Beach, Baker coll. 15 Jul 1911
- charcoti*, *Psilaster* (Koehler, 1906): Fisher, 1940 Discovery Rept. 20: 93.
CAS VOUCHER: 029403 (1) "William Scoresby" Sta. 865

- chelifera*, *Lethasterias nanaimensis* (Verrill, 1914): Fisher, 1928 Bull. U. S. Nat. Mus. 76(2): 134
CAS VOUCHERS: **008626** (1) Sta. 4784; **008630** (1) Sta. 2856; **008631** (1) Sta. 4787; **024617** (fragment, dry) Sta. 4796; **024618** (fragment, dry) Sta. 2842
- chirophorus*, *Pedicellaster* Fisher, 1917b Proc. Biol. Soc. Wash. 30: 93.
CAS HOLOTYPE: **018402** (1 ray) (IZ 143) Sta. 5656
USNM HOLOTYPE: **37030** (1) Sta. 5656
- chiroplus*, *Ampheraster* Fisher, 1928 Bull. U. S. Nat. Mus. 76(2): 84.
CAS HOLOTYPE: **019345** (fragment) Sta. 4427 [small piece of the abactinal wall from one ray; the original label reads "Type," but there is no way to verify the designation]
USNM HOLOTYPE: **37030** (fragments) Sta. 4427 [a few dissociated plates]
- cingulata*, *Psilasteropsis* Fisher, 1906b Bull. U. S. Fish. Comm. 23 (for 1903): 1023.
CAS PARATYPES: **002849** (2) Sta. 3824; **002850** (2) Sta. 4028 [abactinal surface partly dissected]
USNM HOLOTYPE: **21150** (1) Sta. 3997. **PARATYPES:** **31358** (1) Sta. 3997; **31359** (1) Sta. 3995; **31360** (1) Sta. 3997; **31593** (1) Sta. 3887
- columbiae*, *Linckia* Gray, 1840: Fisher, 1911a Bull. U. S. Nat. Mus. 76(1): 242.
CAS VOUCHERS: **008533** (2) GALAPAGOS ISLANDS: Indefatigable Id., W. H. Oschner coll.; **008741** (1 ray) CALIFORNIA: Santa Catalina Id., Catalina Harbor, W. H. Dall coll.; **008743** (1 ray) CALIFORNIA: Santa Catalina Id., Catalina Harbor, W. H. Dall coll.; **008744** (1) CALIFORNIA: Santa Catalina Id., Catalina Harbor, W. H. Dall coll.
- conferta*, *Anasterias* (Koehler, 1923): Fisher, 1940 Discovery Rept. 20: 239.
CAS VOUCHER: **029408** (1) "Discovery II" Sta. 53
- forma *confertus*, *Pisaster ochraceus* (Stimpson, 1862): Fisher, 1930 Bull. U. S. Nat. Mus. 76(3): 164.
CAS VOUCHER: **008725** (3, dry) CANADA: British Columbia, Departure Bay, W. K. Fisher coll. 31 May 1923
- coscinactis*, *Anteliaster* Fisher, 1923 Ann. Mag. Nat. Hist., ser. 9, 12: 252.
CAS HOLOTYPE: **002882** (1 ray) Sta. 4427
USNM HOLOTYPE: **E1421** (1) Sta. 4427
- forma *cribraria*, *Leptasterias groenlandica* (Stimpson, 1862): Fisher, 1930 Bull. U. S. Nat. Mus. 76(3): 47.
CAS VOUCHER: **008752** (4, dry) GREENLAND: Godhavn, Amundsen coll.
- cribellosa*, *Benthogetia* Fisher, 1911b Proc. U. S. Nat. Mus. 40: 415.
CAS HOLOTYPE: **018421** (fragment) (IZ 144) Sta. 5513 [two small pieces of the abactinal wall of the holotype]
USNM HOLOTYPE: **28655** (1) Sta. 5513. **PARATYPES:** **40412** (1) Sta. 5425; **40417** (1) Sta. 5425
- crispatus*, *Ctenodiscus* (Retzius, 1805): Fisher, 1911a Bull. U. S. Nat. Mus. 76(1): 31.
CAS VOUCHER: **008477** (32) Sta. 3216
- cristatus*, *Anthenoides* (Sladen, 1889): Fisher, 1919b Bull. U. S. Nat. Mus. 100(3): 329.
CAS VOUCHERS: **008491** (5) Sta. 5369, **008492** (12) Sta. 5375, **008493** (1, dry) Sta. 5505; **008735** (1) Sta. 5394
- cycloplax*, *Peltaster* Fisher, 1913b Proc. U. S. Nat. Mus. 43: 641.
CAS HOLOTYPE: **018412** (fragment) (IZ 140) Sta. 5279
USNM HOLOTYPE: **30552** (1) Sta. 5279
- densispina*, *Henricia* (Sladen, 1879): Fisher, 1919b Bull. U. S. Nat. Mus. 100(3): 436.
CAS VOUCHER: **008557** (2) Sta. 5519
- diplax*, *Linckia* (Müller and Troschel, 1842): Fisher, 1906b Bull. U. S. Fish. Comm. 23 (for 1903): 1085.
CAS VOUCHERS: **008740** (1) Sta. 3872; **008742** (1 ray) Sta. 3848
- dissonus*, *Pseudarchaster* Fisher, 1910b Zool. Anz. 35: 551.
CAS PARATYPE: **002860** (1) Sta. 3075
USNM HOLOTYPE: **27882** (1) Sta. 3346. **PARATYPES:** **32041** (1) Sta. 3788; **32164** (1) Sta. 3601; **32165** (1) Sta. 3788
- distichopus*, *Tarsaster* Fisher, 1917b Proc. Biol. Soc. Wash. 30: 92.
CAS HOLOTYPE: **018413** (1 ray) (IZ 128) Sta. 5664
USNM HOLOTYPE: **37031** (1) Sta. 5664
- dyscritus*, *Nymphaster* Fisher, 1913b Proc. U. S. Nat. Mus. 43: 635.
CAS PARATYPE: **008518** (1) Sta. 5541
USNM HOLOTYPE: **30543** (1) Sta. 5526. **PARATYPE:** **40596** (1) Sta. 5541
- ectenens*, *Myxoderma sacculatum* Fisher, 1919a Ann. Mag. Nat. Hist., ser. 9, 3: 392. designated in: Fisher, 1928. Bull. U. S. Nat. Mus. 76(2): 51.
CAS LECTOTYPE: **018385** (1 ray) (IZ 174) Sta. 5694. **PARALECTOTYPES:** **008719** (41) (IZ 175) Sta. 4425; **008721** (1) Sta. 4427; **008722** (1) Sta. 2980; **008723** (1) Sta. 4428. **018425** (1 ray) Sta. 4425
USNM LECTOTYPE: **E1417** (1) Sta. 5694. **PARALECTOTYPES:** **E1132** (1) Sta. 4380; **E3596** (4) Sta. 2923; **E10153** (4) Sta. 4428
- endeca*, *Solaster* (Linnaeus, 1771): Fisher, 1911a Bull. U. S. Nat. Mus. 76(1): 307.
CAS VOUCHERS: **008546** (1) Sta. 4246; **008547** (2) Sta. 4272; **031015** (1) ALASKA: Kodiak Id., Karluk, Rutter coll. 1897
- epixanthus*, *Antheniaster* Fisher, 1906b Bull. U. S. Fish. Comm. 23 (for 1903): 1067.
CAS PARATYPES: **008494** (2) Sta. 3813; **008495** (1) Sta. 4080; **008496** (2) Sta. 4081
USNM HOLOTYPE: **21170** (1) Sta. 4080. **PARATYPES:** **31423** (1) Sta. 4115; **31414** (1) Sta. 4080; **31604** (1) Sta. 4081; **31605** (1) Sta. 4084
- eschrichtii*, *Henricia sanguinolenta* (Müller and Troschel, 1842): Fisher, 1911a Bull. U. S. Nat. Mus. 76(1): 276.
CAS VOUCHERS: **008571** (2) ALASKA: Bering Strait, 66° 12' N, 168° 54' W, G. M. Stoney coll. Jul 1884; **008572** (1) ALASKA: Aleutian Islands, Kyska Harbor, beach, W. H. Dall coll. 1873; **008573** (2) ALASKA: Pribilof Islands, Saint Paul Id., W. H. Dall coll.; **008574** (1) ALASKA: Pribilof Islands, Saint Paul Id., W. H. Dall coll.; **008575** (1) ALASKA: Port Clarence; **008576** (1) ALASKA: Aleutian Islands, Attu Id., USFC Str. "Albatross" coll. 10-11 Jun 1906; **008577** (2) ALASKA: Hagmeister Id., W. H. Dall coll. 1874; **008578** (1) ALASKA: Aleutian Islands, Kyska Harbor, 9-14 fms, W. H. Dall coll. 7 Jul 1873; **031033** (1) BERING SEA: Komandorsk

Islands, Medni Id., 1906: **031034** (1) SEA OF OKHOTSK: Kuril Islands, Simushir Id., 1906.

eucnemis, *Astropecten* Fisher, 1919b Bull. U. S. Nat. Mus. 100(3): 75.

CAS PARATYPES: **002834** (1) Sta. 5393 [one ray broken]; **008672** (5) Sta. 5182

USNM HOLOTYPE: **37005** (1) Sta. 5393. PARATYPES: **40081** (22) Sta. 5182; **40239** (1) PHILIPPINES: USFC Str. "Albatross" coll.; **40362** (1) Sta. 5393; **40812** (1) Sta. 5212; **40831** (2) Sta. 5182

euplecta, *Coscinasterias* (*Distolasterias*) Fisher, 1906b Bull. U. S. Fish. Comm. 23 (for 1903): 1105.

CAS PARATYPE: **002885** (1) Sta. 4062 [2 rays attached, 2 broken rays]

USNM HOLOTYPE: **21188** (1) Sta. 3885. PARATYPES: **31381** (1) Sta. 3835; **31934** (3 juveniles) Sta. 4045; **31935** (2) Sta. 4100; **31937** (8) Sta. 4079; **39423** (15) Sta. 3859; **39901** (2, dry) Sta. 4066

euplecta, *Distolasterias* Fisher, 1906: Fisher, 1919b Bull. U. S. Nat. Mus. 100(3): 487.

CAS VOUCHER: **008746** (1 ray) Sta. 5371

evermanni, *Brisinga* Fisher, 1906b Bull. U. S. Fish. Comm. 23 (for 1903): 1113.

CAS HOLOTYPE: **018387** (several rays) (IZ 132) Sta. 3992 [rays mostly broken]

USNM HOLOTYPE: **21193** (1) Sta. 3992

evermanni, *Zoroaster* Fisher, 1905 Bull. Bur. Fish. 24 (for 1904): 317.

CAS PARATYPES: **018408** (2) (IZ 152) Sta. 4400 [both specimens badly fragmented and in poor condition]; **021373** (1 juvenile) (IZ 153) Sta. 4400

USNM HOLOTYPE: **E1136** (1) Sta. 4400

exigua, *Patriella* (Lamarck, 1816): Fisher, 1919b Bull. U. S. Nat. Mus. 100(3): 416.

CAS VOUCHERS: **008597** (1) PHILIPPINES: near Jolo Id., Bubuan Id., USFC Str. "Albatross" coll. 14 Feb 1908; **008598** (1) PHILIPPINES: Palawan Id., Mantaquin Bay, USFC Str. "Albatross" coll. 2 Apr 1909; **008599** (4) BORNEO: Sandukan, USFC Str. "Albatross" coll. 2 Mar 1908; **008600** (2) PHILIPPINES: Luzon Id., Besoga, USFC Str. "Albatross" coll. 14 Jan 1908; **008601** (2) PHILIPPINES: Maricaban Id., USFC Str. "Albatross" coll. 20 Jan 1908; **008602** (1) LOCALITY UNKNOWN: USFC Str. "Albatross" coll.; **008603** (7) PHILIPPINES: Luzon Id., Subic Bay, Port Binang, USFC Str. "Albatross" coll. 8 Jan 1908; **024439** (9) PHILIPPINES: Maricaban Id., USFC Str. "Albatross" coll. 1908.

exilis, *Brisinga* Fisher, 1905 Bull. Bur. Fish. 24 (for 1904): 318.

CAS PARATYPES: **017139** (rays) Sta. 4387; **017140** (1 ray) Sta. 4416

USNM HOLOTYPE: **E1153** (1) Sta. 4398

eximius, *Dipsacaster* Fisher, 1905 Bull. Bur. Fish. 24 (for 1904): 296.

CAS PARATYPES: **002840** (1) Sta. 2936; **002841** (1) Sta. 3112; **002842** (1) Sta. 4345; **002843** (2) Sta. 4427

USNM HOLOTYPE: **22328** (1) Sta. 4334. PARATYPES: **31326** (1) Sta. 2896; **31327** (1) Sta. 2979; **31328** (4) Sta. 2936; **31597** (1) Sta. 2939(?); **31865** (fragment) Sta. 4423; **31950** (2) Sta. 4321; **31951** (1) Sta. 4423; **31952** (1) Sta. 4427; **32086** (2) Sta. 3112; **32087** (1) Sta. 2896

falklandica, *Ganeria* Gray, 1847: Fisher, 1940 Discovery Rept. 20: 127.

CAS VOUCHER: **029418** (1) "William Scoresby" Sta. 847

flexilis, *Poraniopsis inflata* Fisher, 1910c Zool. Anz. 35: 568.

CAS HOLOTYPE: **018415** (1 ray) (IZ 148) Sta. 4407

USNM HOLOTYPE: **27778** (1) Sta. 4407

foliolata, *Luidia* Grube, 1866: Fisher, 1911a

Bull. U. S. Nat. Mus. 76(1): 106.

CAS VOUCHERS: **008642** (3) Sta. 3115; **008643** (1) Sta. 4203;

008644 (2) Sta. 4452; **031038** (1) Sta. 4457

forreri, *Stylasterias* (de Loriol, 1887): Fisher, 1928

Bull. U. S. Nat. Mus. 76(2): 96.

CAS VOUCHERS: **008632** (2 rays, dry) Sta. 4552; **008633** (1 ray, dry) Sta. 2873; **008634** (fragment, dry) Sta. 4410 [small piece of abactinal wall]; **008732** (1, dry) Sta. 4552; **008733** (1, dry) Sta. 3108

fragilis, *Brisinga* Fisher, 1906b Bull. U. S. Fish. Comm. 23 (for 1903): 1115.

CAS PARATYPES: **008703** (2 rays) Sta. 4131; **008704** (2 rays) Sta. 3817; **008705** (2 rays) Sta. 3914; **018417** (several rays) (IZ 104) Sta. 3920 [all rays broken]

USNM HOLOTYPE: **21194** (1) Sta. 3824. PARATYPES: **31102** (1) Sta. 3892; **31103** (1) Sta. 3817; **31104** (1) Sta. 3865; **31105** (1) Sta. 4090; **31106** (1) Sta. 4166; **31874** (1) Sta. 3914; **31875** (1) Sta. 4131; **31876** (1) Sta. 4041; **E4342** (1) Sta. 3910

fragilis, *Brisingella* Fisher, 1906b: Fisher, 1919b

Bull. U. S. Nat. Mus. 100(3): 524.

CAS VOUCHER: **008706** (2 rays) Sta. 5123

gazelle, *Cheiraster* Studer, 1883: Fisher, 1919b

Bull. U. S. Nat. Mus. 100(3): 196.

CAS VOUCHER: **008480** (1) Sta. 5538 [partly dissected]

georgianus, *Neosmilaster* (Studer, 1885): Fisher, 1940

Discovery Rept. 20: 258.

CAS VOUCHER: **029402** (1) South Georgia Marine Biological Station Sta. 10

glabra, *Porania antarctica* Sladen, 1889: Fisher, 1940

Discovery Rept. 20: 155.

CAS VOUCHERS: **008549** (1) "William Scoresby" Sta. 42; **031132** (1) "Discovery II" Sta. 190

granulosus, *Anthenoides* Fisher, 1913b Proc. U. S. Nat. Mus. 43: 647.

CAS PARATYPE: **002851** (1) Sta. 5624

USNM HOLOTYPE: **30559** (1) Sta. 5626. PARATYPES: **40166** (2) Sta. 5624; **40582** (1) Sta. 5622; **40593** (1) Sta. 5624

greenlandica, *Leptasterias* (Lütken, 1857): Fisher, 1930

Bull. U. S. Nat. Mus. 76(3): 45.

CAS VOUCHERS: **008610** (2) Sta. 3252; **008750** (2, dry) KARA SEA: Jugur Strait, 21 fms. clay, ex Riksmuseet Stockholm, Novaya Zemlya Exped. coll. 1875; **008753** (1, dry) LAP-TEV SEA: mouth of Khatanga Bay, Preobraschenije Id., ex Riksmuseet Stockholm, Vega Exped. coll.

habrogenys, *Persephonaster* Fisher, 1913b Proc. U. S. Nat. Mus. 43: 618.

CAS PARATYPE: **002848** (1) Sta. 5114

USNM HOLOTYPE: **30527** (1) Sta. 5114

habrotatus, *Nymphaster* Fisher, 1913b Proc. U. S. Nat. Mus. 43: 639.

- CAS PARATYPE:** 008519 (1) Sta. 5424
USNM HOLOTYPE: 30594 (1) Sta. 5491. **PARATYPES:** 40117 (1) Sta. 5491; 40118 (1) Sta. 5424; 40581 (1) Sta. 5423
- halicepus*, *Coronaster* Fisher, 1917c Proc. Biol. Soc. Wash. 30: 26.
CAS HOLOTYPE: 002886 (2 rays) Sta. 5281
USNM HOLOTYPE: 37012 (1) Sta. 5281
- hawaiiensis*, *Pentaceros* Fisher, 1906b Bull. U. S. Fish. Comm. 23 (for 1903): 1072.
CAS PARATYPES: 019039 (1) Sta. 3849; 019040 (1) Sta. 4075; 019041 (1) Sta. 4072
USNM HOLOTYPE: 21171 (1) Sta. 3850. **PARATYPES:** 31302 (1) Sta. 3849; 31948 (2) Sta. 3849; 31949 (3) Sta. 3850; 32199 (2) Sta. 3849
- heathi*, *Hippasteria* Fisher, 1905 Bull. Bur. Fish. 24 (for 1904): 309.
CAS HOLOTYPE: 018400 (fragments) (IZ 138) Sta. 4239 [2 pieces of the abactinal wall of the holotype]
USNM HOLOTYPE: 22338 (1) Sta. 4239
- helianthoides*, *Pycnopodia* (Brandt, 1835): Fisher, 1928
 Bull. U. S. Nat. Mus. 76 (2): 154.
CAS VOUCHERS: 008622 (3) CANADA: Straits of Juan de Fuca, Port Renfrew, J. C. Brown coll.; 008623 (5) ALASKA: Orca, A. W. Greeley coll.
- hesperus*, *Craspidaster* (Müller and Troschel, 1840): Fisher, 1919b
 Bull. U. S. Nat. Mus. 100(3): 60.
CAS VOUCHERS: 008678 (1) Sta. 5207; 008679 (1) Sta. 5208; 008680 (1) Sta. 5209; 008681 (1) Sta. 5358
- hexactis*, *Leptasterias* (Stimpson, 1862): Fisher, 1930
 Bull. U. S. Nat. Mus. 76(3): 107.
CAS VOUCHERS: 008606 (15, dry) ALASKA: Prince William Sound, Cordova, A. W. Greeley coll.; 008607 (2, dry) CANADA: British Columbia, Alert Bay, P. Baxter coll. 19 Jan 1924; 008608 (4, dry) WASHINGTON: Puget Sound, E. C. Starks coll.
- hirsutus*, *Zoroaster* Ludwig, 1905 Mem. Mus. Comp. Zool. Harvard 32: 172.
CAS HOLOTYPE: 008701 (1 ray) Sta. 3415
USNM HOLOTYPE: 34382 (1) Sta. 3415
- hylacanthus*, *Pectinaster* Fisher, 1913c Proc. U. S. Nat. Mus. 46: 204.
CAS PARATYPES: 008489 (6) Sta. 5445; 008490 (4) Sta. 5619
USNM HOLOTYPE: 32626 (1) Sta. 5467. **PARATYPES:** 40283 (5, dry) Sta. 5619; 40367 (10, dry) Sta. 5445; 40368 (1) Sta. 5619; 40411 (1) Sta. 5444; 40842 (3) Sta. 5619; 40847 (3) Sta. 5445
- hypacanthus*, *Paragonaster* ctenipes Fisher, 1913b Proc. U. S. Nat. Mus. 43: 627.
CAS PARATYPES: 008521 (3) Sta. 5420; 008523 (1) Sta. 5197; 008525 (3) Sta. 5265; 008526 (1) Sta. 5412; 008527 (1) Sta. 5417
USNM HOLOTYPE: 30536 (1) Sta. 5273. **PARATYPES:** 40102 (1) Sta. 5440; 40114 (2) Sta. 5411; 40127 (1) Sta. 5416; 40140 (1) Sta. 5420; 40168 (2) Sta. 5197; 40176 (1) Sta. 5417; 40336 (2) Sta. 5420; 40337 (1) Sta. 5117; 40339 (1) Sta. 5412; 40388 (2) Sta. 5265; 40563 (4) Sta. 5419; 40805 (1) Sta. 5420; 40806 (1) Sta. 5117; 40893 (2) Sta. 5412
- hystrix*, *Luidia* Fisher, 1906b Bull. U. S. Fish. Comm. 23 (for 1903): 1032.
CAS HOLOTYPE: 002824 (1 ray) Sta. 3876. **PARATYPES:** 002821 (1) Sta. 3987; 002822 (1 ray) Sta. 4168; 002823 (1) Sta. 4031
- USNM HOLOTYPE:** 21153 (1) Sta. 3876. **PARATYPES:** 31405 (1) Sta. 3861; 31406 (1) Sta. 3987; 31407 (1) Sta. 4034; 31408 (1) Sta. 4031; 31410 (1) Sta. 4032; 31411 (1) Sta. 4168.
- imbricata*, *Dermasterias* (Grube, 1857): Fisher, 1911a
 Bull. U. S. Nat. Mus. 76(1): 249
CAS VOUCHERS: 008620 (1) ALASKA: Behm Canal, Naha Bay, USFC Str "Albatross" coll. 1905; 008745 (fragment, dry) LOCALITY UNKNOWN [small piece of the abactinal wall]
- imperialis*, *Dipsacaster* Fisher, 1917b Proc. Biol. Soc. Wash. 30: 89.
CAS HOLOTYPE: 019352 (fragment) Sta. 5115 [small section of abactinal wall of one ray. Although there is no locality label with the specimen, the species is known only from the type locality, and part of a ray wall is missing from the USNM holotype.]
USNM HOLOTYPE: 40327 (1) Sta. 5115
- incei*, *Stellaster* Gray, 1847: Fisher, 1919b
 Bull. U. S. Nat. Mus. 100(3): 326.
CAS VOUCHERS: 008531 (1) Sta. 5156; 008532 (9) Sta. 5157
- inflata*, *Poraniopsis* (Fisher, 1906): Fisher, 1911a
 Bull. U. S. Nat. Mus. 76(1): 261.
CAS VOUCHERS: 008580 (1) Sta. 5455; 008581 (1) Sta. 4362; 008734 (1) Sta. 4471
- inflatus*, *Alexandaster* Fisher, 1906c Zool. Anz. 30: 300.
CAS HOLOTYPE: 002864 (1) (SU 309) CALIFORNIA: Monterey Bay, near Pacific Grove, Chinese fisherman coll.
- inops*, *Cheiraster* Fisher, 1906b Bull. U. S. Fish. Comm. 23 (for 1903): 1043.
CAS PARATYPE: 008481 (1) Sta. 3474
USNM HOLOTYPE: 21157 (1) Sta. 3865. **PARATYPES:** 31454 (4) Sta. 3474; 31483 (1) Sta. 3473
- insignis*, *Anseropoda* Fisher, 1906b Bull. U. S. Fish. Comm. 23 (for 1903): 1088.
CAS PARATYPE: 018159 (1) Sta. 4101 [2 rays and part of the disk fragmented and in poor condition]
USNM HOLOTYPE: 21180 (1) Sta. 4101. **PARATYPE:** 32198 (1) Sta. 4101
- insignis*, *Freyella* Ludwig, 1905 Mem. Mus. Comp. Zool. 32: 272.
CAS SYNTYPE: 008708 (1) Sta. 3381 [3 rays attached to disk, several fragmented rays separate]
USNM SYNTYPE: 34348 (6) Sta. 3382; 34349 (2) Sta. 3381; 34350 (3) Sta. 3399
- involutus*, *Cuenotaster* (Koehler, 1912): Fisher, 1940
 Discovery Rept. 20: 184.
CAS VOUCHERS: 029421 (fragment) "Discovery II" Sta. 42 [abactinal wall of one ray]; 029422 (fragment) "Discovery II" Sta. 195 [part of the abactinal wall of one ray]
- japonica*, *Aphelasterias* (Bell, 1881): Fisher, 1930
 Bull. U. S. Nat. Mus. 76(3): 205.
CAS VOUCHERS: 008616 (2) JAPAN: Ayukawa; 008617 (1) JAPAN: Otaru, Dr. Goto coll.; 008619 (2) JAPAN: Same, 1906; 029144 (1) Sta. 4808 [missing 2 rays]
- japonica*, *Poraniopsis* Fisher, 1939 Proc. U. S. Nat. Mus. 86: 470.
CAS HOLOTYPE: 002865 (fragment) Sta. 5049 [small piece of abactinal wall]
- japonicus*, *Ceramaster* (Sladen, 1889): Fisher, 1911a
 Bull. U. S. Nat. Mus. 76(1): 206.
CAS VOUCHERS: 008500 (1) Sta. 3346; 008501 (2) Sta. 3608

- japonicus*, *Solaster* Fisher, 1911a Bull. U. S. Nat. Mus. 76(1): 330.
CAS PARATYPE: 018474 (2) Sta. 4818
USNM HOLOTYPE: 27788 (1) Sta. 4818. **PARATYPES: 33061** (8) Sta. 4818; **33062** (4) Sta. 4867; **33063** (1) Sta. 4871
- jordani*, *Pteraster* Fisher, 1905 Bull. Bur. Fish. 24 (for 1904): 314.
CAS PARATYPE: 008535 (1) Sta. 4412
USNM HOLOTYPE: 22343 (1) Sta. 4354. **PARATYPES: 31867** (1) Sta. 3104; **32017** (1) Sta. 2948; **32018** (2) Sta. 2919; **32019** (1) Sta. 3075; **32020** (1) Sta. 3346; **32021** (1) Sta. 4415; **32022** (1) Sta. 4405; **32023** (1) Sta. 4421
- katherinae*, *Asterias* Gray, 1840 Ann. Mag. Nat. Hist., ser. 1, 6: 179.
CAS SYNTYPE: 002888 (1 ray, dry) NO LOCALITY DATA, received from British Museum, Natural History in 1920 (see Fisher, 1930: 78)
USNM SYNTYPE: E3767 (1, dry) WASHINGTON: mouth of Columbia River
- koehleri*, *Orthasterias* (de Loriol, 1897): Fisher, 1928 Bull. U. S. Nat. Mus. 76(2): 139.
CAS VOUCHERS: 008621 (6, dry) ALASKA: Forrester Id., Willits coll.; **008627** (2) BRITISH COLUMBIA: Departure Bay, W. K. Fisher coll. May–Jun 1923; **008628** (2) CALIFORNIA: Monterey Bay, W. K. Fisher coll.; **008728** (1 ray) Sta. 4202; **008729** (1 ray) Sta. 4431
- kurilensis*, *Hippasteria spinosa* Fisher, 1911a Bull. U. S. Nat. Mus. 76(1): 226.
CAS PARATYPE: 002859 (1) Sta. 4803
USNM HOLOTYPE: 27885 (1) Sta. 4804. **PARATYPE: 32103** (3) Sta. 4804
- leptocerama*, *Tosia* Fisher, 1905 Bull. Bur. Fish. 24 (for 1904): 306.
CAS PARATYPES: 008497 (1) Sta. 2937; **008498** (1) Sta. 4416; **008499** (2) Sta. 4427
USNM HOLOTYPE: 22336 (1) Sta. 4378. **PARATYPES: 30852** (1) Sta. 4407; **30854** (1) Sta. 4415; **30855** (1) Sta. 4416; **30856** (2) Sta. 4423; **30896** (6) Sta. 2937; **32159** (1) Sta. 4427; **32239** (2) Sta. 2937
- leviuscula*, *Henricia* (Stimpson, 1857): Fisher, 1911a Bull. U. S. Nat. Mus. 76(1): 280.
CAS VOUCHERS: 008558 (1) CALIFORNIA: Crescent City, J. O. Snyder coll.; **008559** (9) BRITISH COLUMBIA: Port Renfrew, John C. Brown coll.; **008560** (1) Sta. 4205; **008561** (18) CALIFORNIA: Marin County, Bolinas, coll. Jun 1897; **008562** (4, dry) ALASKA: Kodiak Id., Karluk, C. Rutter coll. 1903.; **008563** (1) CALIFORNIA: Santa Cruz County, Capitola; **008564** (1, dry) Sta. 3595
- loripes*, *Bathybiaster* Sladen, 1889. Fisher, 1940 Discovery Rept. 20: 89.
CAS VOUCHER: 029405 (1) "William Scoresby" Sta. 819b
- luzonicus*, *Astropecten* Fisher, 1913b Proc. U. S. Nat. Mus. 43: 606.
CAS PARATYPE: 002835 (1) Sta. 5112 [1 ray broken]
USNM HOLOTYPE: 30512 (1) Sta. 5112. **PARATYPES: 40277** (1) Sta. 5111; **40278** (2) Sta. 5112; **40279** (1) Sta. 5365; **40849** (1) Sta. 5363
- luzonicus*, *Persephonaster* Fisher, 1913: Fisher, 1919b Bull. U. S. Nat. Mus. 100(3): 118
CAS VOUCHERS: 024437 (1) Sta. 5325; **024438** (1) Sta. 5329; **029128** (2) Sta. 5326
- macropora*, *Anseropoda* Fisher, 1913c Proc. U. S. Nat. Mus. 46: 219.
CAS PARATYPE: 008524 (1) Sta. 5146 [severely fragmented]
USNM HOLOTYPE: 32645 (1) Sta. 5146
- maculata*, *Luidia* Müller and Troschel, 1842: Fisher, 1919b Bull. U. S. Nat. Mus. 100(3): 168.
CAS VOUCHER: 008645 (1) JAPAN: Misaki, received in exchange from Dr. Goto
- maculata*, *Nepanthia* Gray, 1840: Fisher, 1919b Bull. U. S. Nat. Mus. 100(3): 422.
CAS VOUCHER: 008588 (1) Sta. 5161
- magister*, *Odinia* Fisher, 1917b Proc. Biol. Soc. Wash. 30: 93.
CAS HOLOTYPE: 002869 (2 rays) Sta. 5258
USNM HOLOTYPE: 37026 (1 ray); and **40570** (1 ray) Sta. 5258
- magnifica*, *Luidia* Fisher, 1906b Bull. U. S. Fish. Comm. 23 (for 1903): 1033.
CAS HOLOTYPE: 002825 (3 rays) Sta. 3849
USNM HOLOTYPE: 21154 (1) Sta. 3849
- magnificus*, *Zoroaster* Ludwig, 1905 Mem. Mus. Comp. Zool. 32: 159.
CAS SYNTYPE: 008702 (1 ray) Sta. 3360
USNM SYNTYPE: 34383 (1) Sta. 3360
- marsippus*, *Pteraster* Fisher, 1910a Ann. Mag. Nat. Hist., ser. 8, 5: 168.
CAS PARATYPE: 008536 (1) Sta. 4784
USNM HOLOTYPE: 27791 (1) Sta. 4784. **PARATYPES: 31608** (3) Sta. 3330; **31738** (2) Sta. 3500; **31817** (3) Sta. 4792; **32184** (1) Sta. 2842; **32185** (2) Sta. 3223; **32186** (1) Sta. 3486; **32187** (1) Sta. 3500; **32188** (2) Sta. 4779; **32189** (1) Sta. 4784
- megaloplax*, *Prionaster* Fisher, 1913b Proc. U. S. Nat. Mus. 43: 603.
CAS PARATYPE: 008476 (2 rays) Sta. 5625
USNM HOLOTYPE: 30509 (1) Sta. 5624. **PARATYPE: 40814** (1) Sta. 5625
- meridionalis*, *Diplasterias* (Perrier, 1875): Fisher, 1940 Discovery Rept. 20: 251.
CAS VOUCHER: 029419 (1) "William Scoresby" Sta. 25
- merogenys*, *Antelaster* Fisher, 1928 Bull. U. S. Nat. Mus. 76(2): 73.
CAS HOLOTYPE: 002881 (fragment) Sta. 2951 [small fragment of abactinal wall]
USNM HOLOTYPE: E1422 (1) Sta. 2951
- micropelta*, *Tosia* Fisher, 1906b Bull. U. S. Fish. Comm. 23 (for 1903): 1054.
CAS HOLOTYPE: 018397 (fragments) (IZ 136) Sta. 4151 [completely dissociated ossicles]
USNM HOLOTYPE: 21164 (1) Sta. 4151
- microplax*, *Freyellidea* Fisher, 1917a Ann. Mag. Nat. Hist., ser. 8, 20: 430.
CAS SYNTYPE: 002868 (10) Sta. 3342 [in poor condition]
USNM SYNTYPE: E1415 (3) Sta. 3342
- mimica*, *Brisinga* Fisher, 1916 Proc. Biol. Soc. Wash. 29: 32.
CAS HOLOTYPE: 018406 (several rays) (IZ 133) Sta. 5648 [all rays broken]
USNM HOLOTYPE: 37021 (1) Sta. 5648
- mimicus*, *Rosaster* Fisher, 1913b Proc. U. S. Nat. Mus. 43: 632.
CAS PARATYPE: 008530 (1) Sta. 5282

- USNM HOLOTYPE:** 30540 (1) Sta. 5281. **PARATYPES:** 40150 (1) Sta. 5282; 40580 (1) Sta. 5282
- mindanensis*, *Astropecten* Döderlein, 1917: Fisher, 1919b
Bull. U. S. Nat. Mus. 100(3): 67.
CAS VOUCHER: 008662 (1) PHILIPPINES: Catabato, below mouth of Mindanao River, USFC Str. "Albatross" coll. 20 May 1908
- moluccana*, *Brisinga* Fisher, 1916 Proc. Biol. Soc. Wash. 29: 32.
CAS HOLOTYPE: 018386 (2 rays) (IZ 127) Sta. 5626
- moluccanus*, *Benthopten* Fisher, 1913c Proc. U. S. Nat. Mus. 46: 207.
CAS PARATYPES: 002826 (1) Sta. 5618; 008484 (2) Sta. 5619
USNM HOLOTYPE: 32629 (1) Sta. 5618
- moluccanus*, *Nymphaster* Fisher, 1913b Proc. U. S. Nat. Mus. 43: 637.
CAS PARATYPE: 008520 (1) Sta. 5625
USNM HOLOTYPE: 30546 (1) Sta. 5622
- mordax*, *Zoroaster evermanni* Fisher, 1919a Ann. Mag. Nat. Hist., ser. 9, 3: 391. designated in: Fisher, 1928. Bull. U. S. Nat. Mus. 76(2): 44.
CAS PARALECTOTYPES: 018409 (1 ray, dry) (IZ 179) Sta. 3073 [ray broken in half]; 018410 (1 ray, dry) (IZ 178) Sta. 3073; 018414 (1) (IZ 98) Sta. 3073 [severely fragmented]
USNM LECTOTYPE: 37040 (1) Sta. 3073
- multispina*, *Heuricia leviuscula* Fisher, 1910: Fisher, 1911a
Bull. U. S. Nat. Mus. 76(1): 289.
CAS VOUCHER: 021723 (5, dry) Sta. 4784
- muricata*, *Coscinasterias* Verrill, 1867 Trans. Conn. Acad. Arts and Sci. 1(2): 249.
CAS PARATYPE: 019357 (1 ray, dry) NEW ZEALAND: Auckland, H. Edwards coll. 1866 [original label: "No. 987 Cotype Coscinast. muricata."]
- myobranchis*, *Pseudarchaster* Fisher, 1906b Bull. U. S. Fish. Comm. 23 (for 1903): 1037.
CAS PARATYPE: 008529 (1) Sta. 4028
USNM HOLOTYPE: 21158 (1) Sta. 3995. **PARATYPE:** 31306 (1) Sta. 4028
- namimensis*, *Lethasterias* (Verrill, 1914): Fisher, 1928
Bull. U. S. Nat. Mus. 76(2): 132.
CAS VOUCHER: 008755 (1 ray) Sta. 3464 [from only specimen used in Fisher's redescription of this species]
- nesiotes*, *Dipsacaster* Fisher, 1906b Bull. U. S. Fish. Comm. 23 (for 1903): 1026.
CAS PARATYPES: 002844 (1) Sta. 3908; 002845 (2) Sta. 3867 [one specimen partly dissected]
USNM HOLOTYPE: 21151 (1) Sta. 3916. **PARATYPES:** 31598 (2) Sta. 3866; 31599 (3) Sta. 3867; 31600 (1) Sta. 3884; 31601 (1) Sta. 3910
- nesiotes*, *Dipsacaster* Fisher, 1906b: Fisher, 1919b
Bull. U. S. Nat. Mus. 100(3): 145.
CAS VOUCHERS: 008751 (fragment) Sta. 5624; 008754 (1) Sta. 5623
- forma *nesiotes*, *Leptasterias camtschatica dispar* Fisher, 1930 Bull. U. S. Nat. Mus. 76(3): 96.
CAS PARATYPE: 010124 (4, dry) ALASKA: St. Paul Id., G. D. Hanna coll. 1920
- niasicus*, *Cheiraster* Ludwig, 1910: Fisher, 1919b
Bull. U. S. Nat. Mus. 100(3): 192.
CAS VOUCHER: 008482 (2) Sta. 5619
- forma *nodiferous*, *Pisaster ochraceus* (Verrill, 1914): Fisher, 1930
Bull. U. S. Nat. Mus. 76(3): 169.
CAS VOUCHER: 008724 (5, dry) CANADA: British Columbia, Departure Bay, W. K. Fisher coll. 31 May 1923
- obesus*, *Bathybiaster loripes* Sladen, 1889: Fisher, 1940
Discovery Rept. 20: 90.
CAS VOUCHER: 029406 (1) "Discovery II" Sta. 45
- obscurus*, *Pteraster* (Perrier, 1891): Fisher, 1911a
Bull. U. S. Nat. Mus. 76(1): 363.
CAS VOUCHER: 024440 (1) Sta. 3285
- ochotense*, *Asteracanthium* Brandt in Middenforff, 1851 Reise Nord. Ost. Sibieriens 2(2): 28.
CAS SYNTYPE: 002879 (1) USSR: Sea of Okhotsk, Shantar Id., Tugur Bay, Achae Id., Mamtscha Bay. Middendorff coll.
USNM SYNTYPES: E10158 (1) and 10159 (2) USSR: Sea of Okhotsk [These specimens were a gift from Dr. Djakonov to W. K. Fisher. Fisher later deposited them in the USNM.]
- ocoradiata*, *Diplasterias* (Studer, 1885): Fisher, 1940
Discovery Rept. 20: 254.
CAS VOUCHER: 029416 (1) South Georgia Mar. Biol. Station Sta. 10
- oediplax*, *Persephonaster* Fisher, 1913b Proc. U. S. Nat. Mus. 43: 617.
CAS PARATYPE: 008467 (1) Sta. 5219
USNM HOLOTYPE: 30526 (1) Sta. 5123. **PARATYPES:** 40172 (1) Sta. 5215; 40173 (1) Sta. 5219; 40592 (1) Sta. 5123; 40816 (1) Sta. 5219
- oligoporus*, *Pseudarchaster* Fisher, 1913b Proc. U. S. Nat. Mus. 43: 625.
CAS PARATYPE: 002861 (1) Sta. 5609
USNM HOLOTYPE: 30534 (1) Sta. 5609. **PARATYPE:** 40115 (1) Sta. 5608
- ophiactis*, *Zoroaster* Fisher, 1916 Proc. Biol. Soc. Wash. 29: 29.
CAS HOLOTYPE: 018407 (1 ray) (IZ 147) Sta. 5606
USNM HOLOTYPE: 37008 (1) Sta. 5606
- ophiurus*, *Zoroaster* Fisher, 1905 Bull. Bur. Fish. 24 (for 1904): 315.
CAS HOLOTYPE: 018411 (1 ray, dry) (IZ 176) Sta. 4387
USNM HOLOTYPE: 22345 (1) Sta. 4387
- orientalis*, *Ctenodiscus* Fisher, 1913b Proc. U. S. Nat. Mus. 43: 601.
CAS PARATYPE: 008479 (1, dry) Sta. 5656
USNM HOLOTYPE: 30505 (1) Sta. 5528. **PARATYPES:** 40134 (1) Sta. 5460; 40178 (1) Sta. 5656; 40180 (1) Sta. 5587; 40186 (1) Sta. 5585; 40225 (2) Sta. 5126; 40226 (1) Sta. 5274; 40227 (1) Sta. 5527; 40228 (1) Sta. 5528; 40229 (1) Sta. 5529; 40230 (1) Sta. 5499; 40231 (3) Sta. 5527; 40263 (1) Sta. 5460; 40264 (1) Sta. 5619; 40265 (1) Sta. 5605; 40266 (1) Sta. 5470; 40272 (2) Sta. 5423; 40413 (1) Sta. 5586; 40828 (1) Sta. 5126; 40846 (1) Sta. 5587; E9635 (4) Sta. 5656; E9680 (1) Sta. 5527; E9683 (1) Sta. 5499; E9684 (1) Sta. 5528; E9685 (1) Sta. 5126
- ornatissimus*, *Astropecten* Fisher, 1906a Proc. Wash. Acad. Sci. 8: 119.
CAS PARATYPES: 002836 (1) Sta. 4349; 008673 (2) Sta. 4309; 017131 (1) Sta. 4384; 017127 (1) Sta. 4413 [1 ray missing]

- USNM HOLOTYPE:** 21927 (1) Sta. 4413. **PARATYPES:** 30771 (6) Sta. 4305; 30772 (5, dry) Sta. 2921; 30773 (30) Sta. 2935; 30774 (3) Sta. 2983; 30775 (12) Sta. 2935; 30785 (25) Sta. 4309; 31805 (4) Sta. 4349; 32039 (1) Sta. 3114; E9706 (2) Sta. 4310
- ornatus*, *Mediaster* Fisher, 1906b Bull. U. S. Fish. Comm. 23 (for 1903): 1046.
CAS PARATYPES: 008511 (1) Sta. 3474; 008512 (2) Sta. 3475; 008513 (1) Sta. 3476
USNM HOLOTYPE: 21160 (1) Sta. 4022. **PARATYPES:** 30899 (24) Sta. 3474; 30900 (3) Sta. 3475; 31392 (1) Sta. 4021; 31393 (1) Sta. 4123; E9657 (1) Sta. 4028; E9658 (1) Sta. 4141
- pacifica*, *Freyella* Ludwig, 1905 Mem. Mus. Comp. Zool. 32: 267.
CAS HOLOTYPE: 018390 (1 ray) (IZ 131) Sta. 3690 [ray broken in half]
USNM HOLOTYPE: 34379 (1) Sta. 3690
- pacifica*, *Odinia* Fisher, 1906b Bull. U. S. Fish. Comm. 23 (for 1903): 1108.
CAS PARATYPE: 008709 (1) Sta. 3992
USNM HOLOTYPE: 21190 (1) Sta. 3828
- pacificus*, *Leptychaster* Fisher, 1906a Proc. Wash. Acad. Sci. 8: 112.
CAS PARATYPES: 002847 (2) Sta. 2862; 008468 (1) Sta. 3223
USNM HOLOTYPE: 21925 (1) Sta. 2862. **PARATYPES:** 31309 (2) Sta. 3223; 36395 (1) Sta. 2856; 36396 (6) Sta. 2862; 36397 (9) Sta. 3607; 36398 (1) Sta. 3318; 36399 (1, dry) Sta. 3313
- palawanensis*, *Pectinaster mimicus* Fisher, 1919b Bull. U. S. Nat. Mus. 100(3): 185.
CAS PARATYPES: 002827 (2) Sta. 5349 [rays broken]
USNM HOLOTYPE: 37003 (1) Sta. 5349. **PARATYPES:** 40370 (2) Sta. 5349; 40838 (1) Sta. 5349
- panopla*, *Brisinga* Fisher, 1906b Bull. U. S. Fish. Comm. 23 (for 1903): 1109.
CAS HOLOTYPE: 002873 (4 rays) Sta. 4177. **PARATYPE:** 008707 (1 ray) Sta. 4178
USNM HOLOTYPE: 21191 (1) Sta. 4177. **PARATYPE:** 31404 (fragment) Sta. 3992
- papposus*, *Solaster* (Linnaeus, 1767): Fisher, 1911a Bull. U. S. Nat. Mus. 76(1): 325.
CAS VOUCHERS: 008541 (1) Sta. 4787; 008542 (4) Sta. 4792; 008543 (1) Sta. 5024
- papyraceus*, *Asthenactis* Fisher, 1906b Bull. U. S. Fish. Comm. 23 (for 1903): 1097.
CAS HOLOTYPE: 008538 (3 rays) (IZ 91) Sta. 4157
USNM HOLOTYPE: 21183 (1) Sta. 4157
- parelii*, *Pseudarchaster* (Duben and Koren, 1844): Fisher, 1911a Bull. U. S. Nat. Mus. 76(1): 183.
CAS VOUCHER: 008738 (2) Sta. 4855
- forma *paucispinus*, *Pisaster brevispinus* (Stimpson, 1862): Fisher, 1930 Bull. U. S. Nat. Mus. 76(3): 184
CAS VOUCHERS: 029396 (1, dry) CALIFORNIA: Monterey Bay; off China Point, M. S. Wallace coll. 27 Dec 1920: 029397 (1, dry) Sta. 4563; 029398 (1, dry) Sta. 4492; 029399 (1, dry) CALIFORNIA: Monterey Bay
- pauperrima*, *Henricia* Fisher, 1906b Bull. U. S. Fish. Comm. 23 (for 1903): 1091.
CAS HOLOTYPE: 018823 (1 ray) (IZ 125) Sta. 4166 [part of abactinal surface removed]
- USNM HOLOTYPE:** 21182 (1) Sta. 4166. **PARATYPE:** E9595 (1, dry) Sta. 4044
- paxillatus*, *Solaster* Sladen, 1889: Fisher, 1911a Bull. U. S. Nat. Mus. 76(1): 315.
CAS VOUCHERS: 008548 (1) Sta. 3223; 008550 (fragment) Sta. 3331; 008551 (1) Sta. 4784; 008552 (1) Sta. 4792
- pectinatus*, *Bathybiaster* Fisher, 1905 Bull. Bur. Fish. 24 (for 1904): 295.
CAS PARAELECTOTYPES: 008674 (2) Sta. 3307 [1 ray missing]; 008676 (1) Sta. 3308; 008677 (1) Sta. 3601; 018405 (1) (IZ 105) Sta. 4387a
USNM LECTOTYPE: 22327 (1) Sta. 4387. **PARAELECTOTYPES:** 30793 (13, dry) Sta. 3307; 30794 (30, dry) Sta. 3308; 31425 (6, dry) USA: off west coast, USFC Str. "Albatross" coll. 1902; 31443 (30, dry) Sta. 3601; 31523 (1, dry) Sta. 3604; 32093 (1) Sta. 4387; 36408 (15) Sta. 3308; 36409 (13) Sta. 3307
- pedicellaris*, *Acantharchaster variabilis* Fisher, 1910b Zool. Anz. 35: 550.
CAS PARATYPE: 002830 (1) Sta. 3337 [3 rays broken and another partly dissected]
USNM HOLOTYPE: 27801 (1) Sta. 3337. **PARATYPE:** 31577 (2) PHILIPPINES: USFC Str. "Albatross" coll.
- pedicellaris*, *Anasterias* (Koehler, 1923): Fisher, 1940 Discovery Rept. 20: 236.
CAS VOUCHER: 029407 (1) "William Scoresby" Sta. 85
- pedicellaris*, *Astropecten* Fisher, 1913b Proc. U. S. Nat. Mus. 43: 607.
CAS HOLOTYPE: 018391 (1 ray) (IZ 129) Sta. 5424
USNM HOLOTYPE: 30514 (1) Sta. 5424
- penicbra*, *Lithosoma* Fisher, 1917b Proc. Biol. Soc. Wash. 30: 90.
CAS PARATYPES: 008514 (1) Sta. 5123; 008515 (1) Sta. 5510
USNM HOLOTYPE: 37004 (1) Sta. 5528. **PARATYPES:** 40561 (9) Sta. 5388; 40820 (2) Sta. 5388
- penicbra*, *Odinia* Fisher, 1916 Proc. Biol. Soc. Wash. 29: 31
CAS HOLOTYPE: 018393 (3 rays) (IZ 135) Sta. 5217 [base of each ray slightly fragmented]
USNM HOLOTYPE: 37019 (1) Sta. 5217
- penicillatus*, *Thrissacanthias* (Fisher, 1905): Fisher, 1911a Bull. U. S. Nat. Mus. 76(1): 79.
CAS VOUCHER: 008473 (2) Sta. 2890
- perrieri*, *Lysasterias* (Studer, 1885): Fisher, 1940 Discovery Rept. 20: 241.
CAS VOUCHER: 029404 (1) "Discovery II" Sta. 145
- philippinensis*, *Zoraster carinatus* Fisher, 1916 Proc. Biol. Soc. Wash. 29: 30.
CAS PARATYPES: 008687 (5) Sta. 5268; 008688 (1) Sta. 5411; 008689 (2) Sta. 5278; 008690 (1) Sta. 5476; 008691 (2) Sta. 5123; 008692 (2) Sta. 5417; 008693 (1) Sta. 5527; 008694 (1) Sta. 5183; 008695 (1) Sta. 5528; 008696 (2) Sta. 5453; 008697 (4) Sta. 5326; 008698 (3) Sta. 5297; 008699 (1) Sta. 5565; 008700 (1 + 5 ray tips) Sta. 5589
USNM HOLOTYPE: 37010 (1) Sta. 5587. **PARATYPES:** 40198 (2) Sta. 5453; 40206 (1) Sta. 5418; 40214 (3) Sta. 5297; 40216 (3) Sta. 5278; 40217 (2) Sta. 5183; 40219 (1) Sta. 5215; 40220 (1) Sta. 5259; 40221 (1) Sta. 5265; 40222 (1) Sta. 5565; 40294 (7) Sta. 5268; 40295 (3) Sta. 5417; 40296 (7) Sta. 5326; 40379 (2) Sta. 5123; 40380 (1) Sta. 5215; 40381 (1) Sta. 5265; 40382 (1) Sta. 5268; 40383 (1) Sta. 5282; 40384 (1) Sta. 5325; 40385

- (1) Sta. 5326; **40386** (1) Sta. 5411; **40387** (1) Sta. 5412; **40388** (2) Sta. 5527; **40389** (1) Sta. 5528; **40567** (1) Sta. 5565; **40569** (1) Sta. 5124; **40572** (1) Sta. 5538; **40583** (2) Sta. 5326; **40584** (1) Sta. 5589; **40585** (1) Sta. 5298; **40586** (1) Sta. 5371; **40587** (1) Sta. 5282; **40855** (1) Sta. 5476
- phragmorus*, *Astropecten acanthifer* Fisher, 1913b Proc. U. S. Nat. Mus. 43: 604.
CAS PARATYPES: 008648 (4) Sta. 5157; **008649** (4) Sta. 5181; **008650** (7) Sta. 5342
USNM HOLOTYPE: 30510 (1) Sta. 5157. **PARATYPES: 40080** (5) Sta. 5181; **40099** (1) Sta. 5107; **40208** (1) Sta. 5104; **40209** (5) Sta. 5157; **40210** (2) Sta. 5156; **40211** (1) Sta. 5158; **40212** (1) Sta. 5161; **40271** (8) Sta. 5342; **40285** (1) Sta. 5235; **40307** (1, dry) BORNEO: Sandakan Bay, shore, USFC Str. "Albatross" coll.; **40576** (2) Sta. 5157
- placoderma*, *Brisinga (Stengobrisinga)* Fisher, 1916 Proc. Biol. Soc. Wash. 29: 34.
CAS PARATYPE: 002876 (1) Sta. 5648
USNM HOLOTYPE: 37025 (1) Sta. 5648. **PARATYPES: 40320** (rays only) Sta. 5648; **40900** (1) Sta. 5648
- platyacanthum*, *Myxoderma* (Clark, 1913): Fisher, 1928
 Bull. U. S. Nat. Mus. 76(2): 52.
CAS VOUCHERS: 008636 (16) Sta. 3342; **008637** (15) Sta. 2891; **008639** (159) Sta. 2960; **008641** (30) Sta. 3201; **008682** (10) Sta. 4436; **008683** (4) Sta. 4432; **008684** (30) Sta. 2909
- forma *plena*, *Leptasterias hexactis* (Verrill, 1914): Fisher, 1930
 Bull. U. S. Nat. Mus. 76(3): 113.
CAS VOUCHER: 008749 (1, dry) ALASKA: Forrester Id., Heath coll. 1913
- polyacanthus*, *Astropecten* Müller and Troschel, 1842: Fisher, 1906b
 Bull. U. S. Fish. Comm. 23 (for 1903): 1004.
CAS VOUCHER: 008731 (1 ray) Sta. 4168
- polyctenus*, *Benthopecten* Fisher, 1913c Proc. U. S. Nat. Mus. 46: 208.
CAS HOLOTYPE: 018395 (rays) (IZ 95) Sta. 5654 [rays fragmented]. **PARATYPE: 002829** (1) Sta. 5654
USNM HOLOTYPE: 32630 (1) Sta. 5654
- polyctenus*, *Rhipidaster* (Xenorias) Fisher, 1913c Proc. U. S. Nat. Mus. 46: 222.
CAS HOLOTYPE: 018401 (fragments) (IZ 146) Sta. 5622 [small piece of abactinal wall and a few marginal plates]
USNM HOLOTYPE: 32649 (1) Sta. 5622
- forma *pribilofensis*, *Leptasterias alaskensis* Fisher, 1930
 Bull. U. S. Nat. Mus. 76(3): 129.
CAS PARATYPES: 032784 (1, dry) ALASKA: St. Paul Id., G. D. Hanna coll.; **032785** (fragments, dry) ALASKA: St. Paul Id., G. D. Hanna coll. 1918
- prionota*, *Luidia* Fisher, 1913c Proc. U. S. Nat. Mus. 46: 202.
CAS PARATYPE: 008646 (3) Sta. 5181
USNM HOLOTYPE: 32622 (1) Sta. 5181. **PARATYPES: 40155** (1) NO LOCALITY DATA: USFC Str. "Albatross" coll.; **40177** (3) Sta. 5181; **40844** (1) Sta. 5158
- productus*, *Astropecten* Fisher, 1906b Bull. U. S. Fish. Comm. 23 (for 1903): 1010.
CAS PARATYPES: 002837 (1) Sta. 4101; **002838** (3) Sta. 4102 [1 specimen with a broken ray, 1 with 4 rays broken, and 1 fragmented specimen]
USNM HOLOTYPE: 21145 (1) Sta. 4102. **PARATYPES: 31319** (1) Sta. 4102; **32244** (3) Sta. 4102
- propinqua*, *Freyella* Ludwig, 1905 Mem. Mus. Comp. Zool. 32: 280.
CAS HOLOTYPE: 018403 (1 ray) (IZ 97) Sta. 3398 [fragmented]
USNM HOLOTYPE: 34380 (1) Sta. 3398
- pulvillus*, *Pteraster* Sars, 1861: Fisher, 1911a
 Bull. U. S. Nat. Mus. 76(1): 358.
CAS VOUCHER: 008539 (1) Sta. 4792
- purpurea*, *Othilia* Gray, 1840: Fisher, 1919b
 Bull. U. S. Nat. Mus. 100(3): 432.
CAS VOUCHERS: 008589 (1) Sta. 5158; **008590** (1) Sta. 5109; **008591** (1) Sta. 5164; **008592** (1 ray) Sta. 5159; **008593** (1) Sta. 5165; **008594** (1) Sta. 5249; **033805** (3 rays, dry) PHILIPPINES: Masbate Id., Cataingan Bay
- pusilla*, *Brisingella* Fisher, 1917a Ann. Mag. Nat. Hist., ser. 8, 20: 427.
CAS SYNTYPE: 002867 (17 disks and many broken rays) Sta. 4427
USNM SYNTYPE: E1156 (1) Sta. 4427
- pusilla*, *Leptasterias* Fisher, 1930 Bull. U. S. Nat. Mus. 76(3): 118.
CAS PARATYPES: 018211 (3) CALIFORNIA: Monterey Bay, Cypress Point, 26 Jan 1922; **018212** (2) CALIFORNIA: Monterey Bay, Station Point, 25 Apr 1921; **018213** (3) CALIFORNIA: Carmel Bay, Pescadero Point, 11 Nov 1924; **018214** (2) CALIFORNIA: Monterey Bay, 21 Feb 1921; **018215** (1) CALIFORNIA: Monterey Bay, 1921 or 1924; **018216** (11) CALIFORNIA: Monterey County; 1921?
USNM HOLOTYPE: E1499 (1) CALIFORNIA: Monterey Bay, Cypress Point
- pusillulus*, *Astropecten* Fisher, 1906b Bull. U. S. Fish. Comm. 23 (for 1903): 1008.
CAS PARATYPE: 008663 (3) Sta. 4045
USNM HOLOTYPE AND PARATYPES: 21144 (8) Sta. 4116 [mixed lot]. **PARATYPES: 30786** (50) Sta. 4082; **30787** (30) Sta. 4083; **30788** (11) Sta. 4096; **30789** (28) Sta. 4181; **31482** (2) Sta. 3472; **31784** (12) Sta. 4116; **31785** (3) Sta. 4085; **31786** (1) Sta. 3883; **31787** (5) Sta. 4082; **31788** (27) Sta. 4082; **31789** (12) Sta. 4084; **31790** (50) Sta. 4083; **31796** (37) Sta. 4082; **32208** (5) Sta. 4116; **32209** (3) Sta. 3472; **38045** (35) NO LOCALITY DATA: USFC Str. "Albatross" coll.; **E9632** (30) Sta. 4044
- forma *raraspinna*, *Marthasterias glacialis* Perrier, 1875: Fisher, 1940
 Discovery Rept. 20: 273.
CAS VOUCHER: 029420 (1) "Discovery II" Sta. 90
- regularis*, *Haliyle* Fisher, 1913c Proc. U. S. Nat. Mus. 46: 211.
CAS PARATYPE: 002863 (fragment) Sta. 5165 [large piece of abactinal wall]
USNM HOLOTYPE: 32634 (1, dry) Sta. 5165
- forma *regularis*, *Leptasterias hexactis* (Verrill, 1914): Fisher, 1930
 Bull. U. S. Nat. Mus. 76(3): 111.
CAS VOUCHER: 008747 (1, dry) WASHINGTON: San Juan Id., Friday Harbor, I. S. and T. S. Oldroyd coll. 1918
- rhomaleum*, *Myxoderma platyacanthum* Fisher, 1919a Ann. Mag. Nat. Hist., ser. 9, 3: 393.
CAS PARATYPE: 021372 (177) Sta. 3112
USNM SYNTYPES: 37041 (1) Sta. 2890; **E1159** (1) Sta. 2890; **E1160** (1) Sta. 3112

- robusta*, *Henricia* Fisher, 1906b Bull. U. S. Fish. Comm. 23 (for 1903): 1090.
CAS HOLOTYPE: 018398 (fragment) (IZ 92) Sta. 4115 [distal part of one ray]
USNM HOLOTYPE: 21181 (1) Sta. 4115
- rugulosus*, *Anthenoides* Fisher, 1913b Proc. U. S. Nat. Mus. 43: 648.
CAS PARATYPE: 002852 (2) Sta. 5501
USNM HOLOTYPE: 30561 (1) Sta. 5121. **PARATYPES: 40328** (1) Sta. 5260; **40360** (1) Sta. 5198; **40361** (1) Sta. 5536; **40375** (1) Sta. 5122; **40564** (4) Sta. 5503; **40565** (2) Sta. 5501; **40577** (1) Sta. 5527
- sacculatum*, *Myxoderma* (Fisher, 1905): Fisher, 1928
 Bull. U. S. Nat. Mus. 76(2): 45.
CAS VOUCHERS: 002877 (1, dry) Sta. 4540; **024100** (1 ray, dry) (IZ 180) Sta. 4775 [1 ray from 1 of 2 specimens described by Fisher under heading "Variations"]
- sanguinolenta*, *Henricia* (Müller, 1776): Fisher, 1911a
 Bull. U. S. Nat. Mus. 76(1): 271.
CAS VOUCHERS: 008566 (1) Sta. 4787; **008567** (1) Sta. 4792; **008568** (2) Sta. 4784; **008569** (2) Sta. 4779; **008570** (1) Sta. 4777
- savignyi*, *Luidia* (Audouin, 1809): Fisher, 1919b
 Bull. U. S. Nat. Mus. 100(3): 170.
CAS VOUCHER: 008647 (1) Sta. 5159
- scalpifera*, *Smilasterias* Sladen, 1889
 Discovery Rept. 20: 261.
CAS VOUCHER: 029409 (1) "Discovery II" Sta. 1564
- segnis*, *Pisaster ochraceus* Fisher, 1926 Ann. Mag. Nat. Hist., ser. 9, 17: 560.
CAS PARATYPE: 002878 (1, dry) MEXICO: Baja California, 16 miles S of US border, Ricketts and Martin coll. 13 May 1925
USNM HOLOTYPE: E1238 (1) MEXICO: Baja California, 16 miles S of US border, Ricketts coll.
- snyderi*, *Cheiraster* Fisher, 1906b Bull. U. S. Fish. Comm. 23 (for 1903): 1040.
CAS PARATYPES: 008483 (1) Sta. 3997; **008720** (1) Sta. 4019
USNM HOLOTYPE: 21155 (1) Sta. 3997. **PARATYPES: 30848** (1) Sta. 3995; **30849** (1) Sta. 3998; **30850** (1) Sta. 4007
- spectabilis*, *Calliderma* Fisher, 1906b Bull. U. S. Fish. Comm. 23 (for 1903): 1058.
CAS PARATYPES: 002853 (1, dry) (IZ 309) Sta. 4074; **002855** (3 and a dissected aboral surface) Sta. 4077
USNM HOLOTYPE: 21166 (1, dry) Sta. 3938. **PARATYPES: 31622** (1) Sta. 4098; **31623** (3) Sta. 4077; **31913** (1) Sta. 4077; **31914** (1) Sta. 4077; **31915** (1) Sta. 4077; **31916** (1) Sta. 4077; **31917** (1) Sta. 4077; **31918** (1) Sta. 4098; **32203** (1) Sta. 4077 [specimen missing]; **32204** (1, dry) Sta. 4102; **32266** (3) Sta. 4077
- spinulosus*, *Zoroaster* Fisher, 1906b Bull. U. S. Fish. Comm. 23 (for 1903): 1102.
CAS PARATYPES: 017301 (1 ray) Sta. 4007; **017324** (1 ray) Sta. 4139; **017325** (1) Sta. 4112
USNM HOLOTYPE: 21187 (1) Sta. 3892. **PARATYPE: 31582** (1) Sta. 4139
- squamatus*, *Pholidaster* Sladen, 1889: Fisher, 1919b
 Bull. U. S. Nat. Mus. 100(3): 484
CAS VOUCHERS: 008685 (1) Sta. 5212; **008686** (1) Sta. 5392
- steineni*, *Neosmilaster* (Studer, 1885): Fisher, 1940
 Discovery Rept. 20: 259.
CAS VOUCHER: 029401 (1) "William Scoresby" Sta. 824
- stereosomus*, *Echinaster* Fisher, 1913a
 Zool. Anz. 42: 195.
CAS PARATYPE: 008595 (1) Sta. 5483
USNM HOLOTYPE: 37001 (1) Sta. 5483
- stimpsoni*, *Solaster* Verrill, 1909: Fisher, 1911a
 Bull. U. S. Nat. Mus. 76(1): 311.
CAS VOUCHER: 008554 (1) Sta. 4205
- studerii*, *Anasterias* Perrier, 1891: Fisher, 1940
 Discovery Rept. 20: 234.
CAS VOUCHER: 029414 (1) "William Scoresby" Sta. 92
- styracius*, *Benthopecten* Fisher, 1913c Proc. U. S. Nat. Mus. 46: 208.
CAS PARATYPE: 002828 (1) Sta. 5668
USNM HOLOTYPE: 32631 (1) Sta. 5668
- suluensis*, *Lophaster* Fisher, 1913c Proc. U. S. Nat. Mus. 46: 219.
CAS HOLOTYPE: 018394 (1 ray) Sta. 5432
USNM HOLOTYPE: 32646 (1) Sta. 5423
- swifti*, *Gephyreaster* (Fisher, 1905): Fisher, 1911a
 Bull. U. S. Nat. Mus. 76(1): 175.
CAS VOUCHER: 008737 (1) Sta. 4784
- tenellus*, *Astropecten* Fisher, 1913b Proc. U. S. Nat. Mus. 43: 606.
CAS PARATYPES: 008665 (1) Sta. 5268; **008666** (1) Sta. 5518
USNM HOLOTYPE: 30513 (1) Sta. 5453. **PARATYPES: 40185** (1) Sta. 5268; **40273** (2) Sta. 5453; **40274** (1) Sta. 5518; **40850** (1) Sta. 5453
- tenellus*, *Mediaster* Fisher, 1905 Bull. Bur. Fish. 24 (for 1904): 307.
CAS HOLOTYPE: 018392 (fragment) (IZ 137) Sta. 4427 [part of one ray]. **PARATYPE: 021374** (1) (IZ 93) Sta. 4421
USNM HOLOTYPE: 22337 (1) Sta. 4427
- tenuis*, *Tarachaster* Fisher, 1913c Proc. U. S. Nat. Mus. 46: 217.
CAS HOLOTYPE: 008579 (1 ray) Sta. 5543
USNM HOLOTYPE: 32642 (1) Sta. 5543. **PARATYPE: 32640** (1) Sta. 5543
- trachydisca*, *Brisinga* Fisher, 1916: Fisher, 1919b
 Bull. U. S. Nat. Mus. 100(3): 510.
CAS VOUCHER: 008739 (2) Sta. 5487
- triremis*, *Asterias (Smilasterias)* Sladen, 1889 Challenger Repts., Zoology 30: 579.
CAS SYNTYPE: 002883 (1, dry) INDIAN OCEAN: between Kerguelen and Heard Ids., 150 fms, coarse gravel, 2 Feb 1874, "Challenger" Sta. 150
USNM SYNTYPE: E3999 (1, dry) "Challenger" Sta. 150 (see above)
- tropicus*, *Solaster* Fisher, 1913c Proc. U. S. Nat. Mus. 46: 221.
CAS HOLOTYPE: 018396 (1 ray) (IZ 145) Sta. 5654
USNM HOLOTYPE: 32627 (1) Sta. 5654
- trychnus*, *Ophidiaster* Fisher, 1913c Proc. U. S. Nat. Mus. 46: 215.
CAS PARATYPE: 018399 (1) (IZ 94) PHILIPPINES: N coast of Samar, Port Palapag
USNM HOLOTYPE: 32639 (1) PHILIPPINES: N coast of Samar, Port Palapag
- velitaris*, *Astropecten* von Martens, 1865: Fisher, 1919b
 Bull. U. S. Nat. Mus. 100(3): 70.

- CAS VOUCHERS:** 008668 (2) Sta. 5156; 008669 (21) Sta. 5158 and BORNEO: Sandakan Bay [mixed lot]; 008670 (2) Sta. 5161
- verrilli*, *Hydrasterias* Fisher, 1906b Bull. U. S. Fish. Comm. 23 (for 1903): 1106.
- CAS HOLOTYPE:** 002884 (2 rays) Sta. 3867
USNM HOLOTYPE: 21189 (1) Sta. 3867
- volsellatus*, *Coronaster* (Sladen, 1889): Fisher, 1919b Bull. U. S. Nat. Mus. 100(3): 496.
CAS VOUCHERS: 008584 (2 rays) Sta. 5256; 008585 (6 rays) Sta. 5391; 034010 (1 ray) Sta. 5417
- wyvillii*, *Cnemidaster* Sladen, 1889: Fisher, 1919b Bull. U. S. Nat. Mus. 100(3): 480.
CAS VOUCHER: 008587 (1) Sta. 5607
- zenognathus*, *Hymenasterides* Fisher, 1911b Proc. U. S. Nat. Mus. 40: 425.
CAS PARATYPES: 008534 (1) Sta. 5623; 008596 (1) Sta. 5550
USNM HOLOTYPE: 28660 (1) Sta. 5623
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APPENDIX I

U. S. FISHERIES STEAMER "ALBATROSS"

STATION NUMBERS

- 2842: ALASKA: Aleutian Ids.; off Unalaska Id. (54° 15' 00" N, 166° 03' 00" W); 72 fms; pebbles; 23 Jul 1888.
- 2856: ALASKA: Gulf of Alaska (58° 07' N, 151° 36' W); 68 fms; gray shells and black specks; 22 Aug 1888.
- 2860: CANADA: British Columbia; Queen Charlotte Ids. (51° 23' N, 130° 34' W); 876 fms; green mud; 31 Aug 1888.
- 2862: CANADA: British Columbia; Queen Charlotte Strait (50° 49' N, 127° 36' 30" W); 238 fms; gray sand and pebbles; 1 Sep 1888.
- 2871: WASHINGTON: off Gray's Harbor (46° 55' N, 125° 11' W); 559 fms; brown ooze; 23 Sep 1888.
- 2873: WASHINGTON: (48° 30' N, 124° 57' W); 40 fms; rocks; 24 Sep 1888.
- 2890: OREGON: (43° 46' N, 124° 57' W); 277 fms; gray sand; 19 Oct 1888.
- 2891: CALIFORNIA: (34° 25' N, 120° 42' W); 233 fms; mud; 5 Jan 1889.
- 2892: CALIFORNIA: Santa Barbara Channel (34° 15' N, 120° 36' W); 284 fms; yellow mud; 5 Jan 1889.
- 2896: CALIFORNIA: off Santa Rosa Id.; (33° 55' 30" N, 128° 28' 00" W); 376 fms; yellow mud; 6 Jan 1889.
- 2909: CALIFORNIA: (34° 22' N, 120° 08' 30" W); 205 fms; green mud; 8 Jan 1889.
- 2919: CALIFORNIA: (32° 17' N, 119° 17' W); 984 fms; gray mud; 17 Jan 1889.
- 2921: CALIFORNIA: Cortez Bank (32° 27' N, 119° 14' 15" W); 145 fms; fine gray sand; 17 Jan 1889.
- 2923: CALIFORNIA: off San Clemente Id. (32° 40' 30" N, 117° 31' 30" W); 822 fms; green mud; 19 Jan 1889.
- 2925: CALIFORNIA: (32° 32' 30" N, 117° 24' W); 339 fms; mud; 19 Jan 1889.
- 2927: CALIFORNIA: (32° 43' N, 117° 51' W); 313 fms; green mud; 23 Jan 1889.
- 2935: CALIFORNIA: San Diego; off Pt. La Jolla (32° 44' 30" N, 117° 23' W); 124 fms; fine gray sand; 4 Feb 1889.
- 2936: CALIFORNIA: San Diego; off Pt. La Jolla (32° 49' N, 117° 27' 30" W); 359 fms; mud; 4 Feb 1889.
- 2937: CALIFORNIA: off Southern California (33° 04' 30" N, 117° 42' W); 464 fms; green mud; 4 Feb 1889.
- 2939: CALIFORNIA: off Southern California (33° 36' N, 118° 09' 30" W); 27 fms; fine gray sand and stones; 5 Feb 1889.
- 2948: CALIFORNIA: off Santa Cruz Id. (33° 55' 30" N, 119° 41' 30" W); 266 fms; gray sand, gravel, and broken shells; 7 Feb 1889.
- 2951: CALIFORNIA: S of Santa Cruz Id. (33° 55' 30" N, 119° 55' W); 48 fms; fine gray sand; 8 Feb 1889.
- 2960: CALIFORNIA: (34° 10' 45" N, 120° 16' 45" W); 276 fms; green mud; 9 Feb 1889.
- 2979: CALIFORNIA: off Anacapa Id. (33° 56' 30" N, 119° 22' 30" W); 388 fms; green mud; 12 Feb 1889.
- 2980: CALIFORNIA: off Anacapa Id. (33° 49' 45" N, 119° 24' 30" W); 603 fms; green mud; 12 Feb 1889.
- 2983: MEXICO: E of Guadalupe Id. (28° 58' 30" N, 118° 15' 45" W); 58 fms; gray sand and broken shells; 28 Feb 1889.
- 3068: WASHINGTON: (47° 35' 30" N, 122° 27' W); 135 fms; green mud; 18 Jun 1889.
- 3070: WASHINGTON: off Sea Lion Rock (47° 29' 30" N, 125° 43' W); 636 fms; green mud; 28 Jun 1889.
- 3071: WASHINGTON: off Sea Lion Rock (47° 29' N, 125° 33' 30" W); 685 fms; green mud; 28 Jun 1889.
- 3073: WASHINGTON: off Sea Lion Rock (47° 28' N, 125° 15' W); 477 fms; green mud; 28 Jun 1889.
- 3075: WASHINGTON: off Sea Lion Rock (47° 22' N, 125° 41' W); 859 fms; green mud; 29 Jun 1889.
- 3104: CALIFORNIA: off Half Moon Bay (37° 23' N, 123° 08' W); 391 fms; clay; 11 Mar 1890.
- 3108: CALIFORNIA: vicinity of Half Moon Bay (37° 19' N, 122° 36' W); 43 fms; rocks and broken shells; 11 Mar 1890.
- 3112: CALIFORNIA: off Pigeon Pt. (37° 08' N, 122° 47' W); 296 fms; fine gray sand; 12 Mar 1890.
- 3114: CALIFORNIA: Monterey Bay (37° 06' N, 122° 32' W); 62 fms; mud; 12 Mar 1890.
- 3115: CALIFORNIA: (37° 05' N, 122° 24' W); 43 fms; fine black sand; 12 Mar 1890.
- 3127: CALIFORNIA: (36° 45' N, 122° 10' 02" W); 418 fms; green mud and sand; 13 Mar 1890.
- 3186: CALIFORNIA: off Pt. Sur (36° 18' 50" N, 122° 06' W); 328 fms; black sand and mud; 3 Apr 1890.
- 3201: CALIFORNIA: (34° 14' 45" N, 119° 54' W); 280 fms; green mud; 6 Apr 1890.
- 3216: BERING SEA: S of Alaskan Peninsula (54° 20' 30" N, 163° 37' W); 61 fms; black sand and mud; 21 May 1890.
- 3223: ALASKA: Unimak Pass (54° 26' 15" N, 165° 32' W); 56 fms; black pebbles; 22 May 1890.
- 3231: BERING SEA: (58° 35' 00" N, 157° 28' 50" W); 12 fms; sand; 2 Jun 1890.
- 3233: BERING SEA: (58° 23' 45" N, 157° 42' 45" W); 7.25 fms; sand and pebbles; 2 Jun 1890.
- 3243: BERING SEA: (58° 45' 10" N, 160° 28' W); 4.5 fms; fine gray sand; 8 Jun 1890.
- 3252: BERING SEA: (57° 22' 20" N, 164° 24' 40" W); 29.5 fms; black mud; 14 Jun 1890.
- 3285: BERING SEA: (56° 45' 45" N, 160° 42' 45" W); 35 fms; gray sand and black specks; 17 Jul 1890.
- 3307: BERING SEA: NW of Unimak Id. (53° 55' N, 170° 50' W); 1033 fms; green ooze; 3 Aug 1890.
- 3308: BERING SEA: W of Pribilof Islands (56° 12' N, 172° 07' W); 1625 fms; green ooze; 4 Aug 1890.
- 3313: BERING SEA: (54° 01' 51" N, 166° 27' 38" W); 68 fms; fine black sand; 15 Aug 1890.
- 3318: BERING SEA: off Unalaska (53° 47' 40" N, 167° 14' W); 61 fms; black sand, gravel, and shells; 16 Aug 1890.
- 3330: BERING SEA: (54° 00' 45" N, 166° 53' 50" W); 351 fms; black sand and mud; 21 Aug 1890.
- 3331: BERING SEA: (54° 01' 40" N, 166° 48' 50" W); 350 fms; mud; 21 Aug 1890.
- 3337: ALASKA: (53° 55' 30" N, 163° 26' W); 280 fms; green mud and rocks; 27 Aug 1890.
- 3338: ALASKA: off Shumagin Id. (54° 19' N, 159° 40' W); 625 fms; green mud and sand; 28 Aug 1890.
- 3342: CANADA: British Columbia; off S tip of Moresby Id. (52° 39' 30" N, 132° 38' W); 1588 fms; gray ooze and coarse sand; 3 Sep 1890.
- 3343: WASHINGTON: off Destruction Id. (47° 40' 40" N, 125° 20' W); 516 fms; green mud; 21 Sep 1890.
- 3344: WASHINGTON: off Cape Elizabeth (47° 20' N, 125° 07' 30" W); 831 fms; green mud; 21 Sep 1890.
- 3346: OREGON: (45° 30' N, 124° 52' W); 786 fms; green mud; 22 Sep 1890.
- 3347: OREGON: off Cascade Head (45° 09' 35" N, 124° 45' W); 345 fms; mud; 22 Sep 1890.
- 3348: CALIFORNIA: off Pt. Arena (39° 02' 40" N, 124° 06' 15" W); 455 fms; fine gray sand; 25 Sep 1890.

- 3349: CALIFORNIA: off Northern California (38° 57' 45" N, 124° 03' 05" W); 239 fms; black sand; 25 Sep 1890.
- 3350: CALIFORNIA: off Northern California (38° 58' 10" N, 123° 57' 05" W); 75 fms; fine sand and mud; 25 Sep 1890.
- 3360: PANAMA: (6° 17' N, 82° 05' W); 1672 fms; fine black and green sand; 24 Feb 1891.
- 3381: PANAMA: (4° 56' N, 80° 52' 30" E); 1772 fms; green mud; 6 Mar 1891.
- 3382: PANAMA: (6° 21' 00" N, 80° 41' 00" W) 1793 fms; green mud; 7 Mar 1891.
- 3398: PANAMA: Gulf of Panama, N of Cape San Francisco (1° 07' N, 80° 21' W); 1573 fms; green ooze; 23 Mar 1891.
- 3399: PANAMA: (1° 01' 00" N, 81° 04' 00" W); 1740 fms; green ooze; 24 Mar 1891.
- 3415: MEXICO: (14° 46' N, 98° 40' W); 1879 fms; brown mud and globigerina ooze; 10 Apr 1891.
- 3464: STRAITS OF JUAN DE FUCA: due S of Vancouver Id., about on the international boundary; (48° 14' 00" N, 123° 20' 40" W); 40 fms; gray sand and pebbles; 4 Sep 1891.
- 3472: HAWAII: off Sandwich Id., Kaiwi Channel (21° 12' N, 157° 49' W); 295 fms; fine white sand; 4 Dec 1891.
- 3473: HAWAII: (21° 15' 00" N, 157° 30' 00" W); 313 fms; fine gray sand; 6 Dec 1891.
- 3474: HAWAII: (21° 12' N, 157° 38' 30" W); 375 fms; fine white sand; 6 Dec 1891.
- 3475: HAWAII: (21° 08' N, 157° 43' W); 351 fms; fine white sand; 6 Dec 1891.
- 3476: HAWAII: (21° 09' N, 157° 53' W); 298 fms; fine white sand; 6 Dec 1891.
- 3486: BERING SEA: W of Pribilof Ids. (57° 19' N, 173° 53' W); 150 fms; green mud and fine sand; 13 Jul 1893.
- 3489: BERING SEA: (57° N, 173° 14' W); 184 fms; green mud and gray sand; 13 Jul 1893.
- 3500: BERING SEA: (56° 02' N, 169° 30' W); 121 fms; fine gray sand and gravel; 17 Jul 1893.
- 3595: WASHINGTON: Admiralty Inlet; (48° 13' 00" N, 122° 59' 30" W); 49 fms; rocks, gravel and sand; 30 Apr 1894.
- 3601: BERING SEA: between Saint George Id. and Bogoslof Id. (55° 06' N, 169° 08' W); 1044 fms; green mud and fine sand; 5 Aug 1895.
- 3604: BERING SEA: S of Saint George Id. (54° 54' N, 168°, 59' W); 1401 fms; green ooze; 12 Aug 1895.
- 3607: BERING SEA: (54° 11' 30" N, 167° 25' W); 987 fms; green mud, black lava and sand; 18 Aug 1895.
- 3608: BERING SEA: (55° 19' N, 168° 11' W); 276 fms; gray sand; 20 Aug 1895.
- 3646: KAMCHATKA: SE coast, to W of Robben Id., Sea of Okhotsk 2 to 10 mi. distant; 18 fms; fine gray sand; 31 Aug 1896.
- 3663: CALIFORNIA: Santa Catalina Id., off Avalon, Dakins Cove; 47 fms; fine gray sand; 8 Apr 1897.
- 3664: CALIFORNIA: Santa Catalina Id., off Avalon, Dakins Cove; 80 fms; fine gray sand; 8 Apr 1897.
- 3665: CALIFORNIA: Santa Catalina Id. (37° 17' 00" N, 118° 24' 00" W); 59 fms; fine gray sand; 9 Apr 1897.
- 3670: CALIFORNIA: Monterey Bay (36° 43' N, 122° 12' W); 581 fms; green mud and sand; 17 Apr 1897.
- 3690: TAHITI: through Paumotu Archipelago, NW face of Hao Atoll, E 2 mi.; 812 fms; coral sand; 29 Oct 1899.
- 3788: OREGON: Cape Blanco Lt., S 69° E, 30 mi. (43° 01' N, 125° 12' 30" W); 1064 fms; green mud; 27 Apr 1901.
- 3810: HAWAII: S coast of Oahu, Honolulu Lt., N 2°, E 2.4'; 211–53 fms; fine coral sand; 27 Mar 1902.
- 3813: HAWAII: S coast of Oahu, Diamond Head Lt., N 76°, E 2.2'; 264–183 fms; coral sand, lava specks and shells; 28 Mar 1902.
- 3817: HAWAII: S coast of Oahu; Diamond Head Lt., N 77°, W 8.4'; 320 fms; coarse lava, coral sand, and shells; 28 Mar 1902.
- 3824: HAWAII: S coast of Molokai, Lae-o Ka Laau Lt., N 35°, W 5.1'; 222–498 fms; coral, rock, and broken shell; 1 Apr 1902.
- 3828: HAWAII: S coast of Oahu, Lae-o Ka Laau Lt., N 46°, W 11'; 319–281 fms; broken shells and gravel; 1 Apr 1902.
- 3835: HAWAII: S coast of Molokai, Lae-o Ka Laau Lt., N 64° W, 13.7'; 169–182 fms; fine brown sand and mud; 3 Apr 1902.
- 3848: HAWAII: S coast of Molokai, Lae-o Ka Laau Lt., N 68° 15', W 22.4'; 44–73 fms; sand and gravel; 8 Apr 1902.
- 3849: HAWAII: S coast of Molokai, Lae-o Ka Laau Lt., N 71°, W 21.9'; 43–73 fms; coarse sand, broken shells, and coral; 8 Apr 1902.
- 3850: HAWAII: S coast of Molokai, Lae-o Ka Laau Lt., N 74° 15', W 22.2'; 43–66 fms; coarse sand, broken shells, and coral; 8 Apr 1902.
- 3859: HAWAII: Pailolo Channel, Mokuhooniki Islet, N 18°, E 5.6'; 138–140 fms; fine sand and mud; 9 Apr 1902.
- 3861: HAWAII: Pailolo Channel, Mokuhooniki Islet, N 13° 15', W 7.4'; 30–52 fms; fine sand, small pebbles, and coral; 10 Apr 1902.
- 3865: HAWAII: Pailolo Channel, Mokuhooniki Islet, S 79°, W 6.9'; 256–283 fms; fine volcanic sand and rocks; 10 Apr 1902.
- 3866: HAWAII: Pailolo Channel, Mokuhooniki Islet, S 70° 15', W 7.6'; 283–284 fms; gray mud and fine sand; 10 Apr 1902.
- 3867: HAWAII: Pailolo Channel, Mokuhooniki Islet, S 64° 30', W 9.1'; 284–290 fms; fine sand and mud; 10 Apr 1902.
- 3872: HAWAII: Auau Channel, Mokuhooniki Islet, N 3°, E 16.6'; 43–32 fms; yellow sand, pebbles, and coral; 12 Apr 1902.
- 3875: HAWAII: Auau Channel, Mokuhooniki Islet, N 14° 30', E 13.7'; 65–34 fms; fine gray sand; 12 Apr 1902.
- 3876: HAWAII: Auau Channel, Lahaina Lt., N 60° 45', E 1.6; 28–43 fms; sand and gravel; 14 Apr 1902.
- 3883: HAWAII: Pailolo Channel, Mokuhooniki Islet, S 80° 30', W 7.8'; 277–284 fms; globigerina ooze; 16 Apr 1902.
- 3884: HAWAII: Pailolo Channel, Mokuhooniki Islet, S 75°, W 9.2'; 284–290 fms; globigerina and mud; 16 Apr 1902.
- 3885: HAWAII: Pailolo Channel, Mokuhooniki Islet, N 27°, W 3.3'; 136–148 fms; sand and pebbles; 17 Apr 1902.
- 3887: HAWAII: N coast of Molokai, Mokuhooniki Islet, S 15°, W 8.8'; 552–809 fms; globigerina and mud; 17 Apr 1902.
- 3892: HAWAII: N coast of Molokai, Mokuhooniki Islet, S 66° 15', E 9.8'; 328–414 fms; fine gray sand; 18 Apr 1902.
- 3908: HAWAII: S coast of Oahu, Diamond Head Lt., N 21°, E 6.9'; 304–308 fms; fine white sand and mud; 5 May 1902.
- 3909: HAWAII: S coast of Oahu, Diamond Head Lt., N 31°, E 5.3'; 308–322 fms; fine white sand and mud; 5 May 1902.
- 3910: HAWAII: S coast of Oahu, Diamond Head Lt., N 7°, E 12.5'; 311–337 fms; fine gray sand and mud; 5 May 1902.
- 3911: HAWAII: S coast of Oahu, Diamond Head Lt., N 10°, E 11'; 337–334 fms; fine gray sand and mud; 5 May 1902.
- 3914: HAWAII: S coast of Oahu, Diamond Head Lt., N 23° 10', E 16.4'; 289–292 fms; gray sand and mud; 6 May 1902.
- 3916: HAWAII: S coast of Oahu, Diamond Head Lt., N 40°, E 9.7'; 299–330 fms; gray sand and mud; 6 May 1902.
- 3917: HAWAII: S coast of Oahu, Diamond Head Lt., N 50° 30', E 10.3'; 330–294 fms; gray sand and mud; 6 May 1902.
- 3918: HAWAII: S coast of Oahu, Diamond Head Lt., N 63°, E 8.0'; 257–294 fms; white sand and mud; 6 May 1902.
- 3920: HAWAII: S coast of Oahu, Diamond Head Lt., N 74°, E 8.9'; 280–265 fms; gray sand and broken shells; 6 May 1902.

- 3938: HAWAII: off Laysan Id., Laysan Id. Lt., S 88° 30', E 7.8'; 148–163 fms; white sand and broken shells; 16 May 1902.
- 3957: HAWAII: off Laysan Id., Laysan Id. Lt., S 87°, E 8.2'; 220–173 fms; fine white sand; 22 May 1902.
- 3987: HAWAII: off Kauai, Hanamaula Warehouse, S 29°, W 6.8'; 50–55 fms; coarse coral sand and fragments; 11 Jun 1902.
- 3992: HAWAII: off Kauai, Mokuuae Islet, S 54°, E 3.5'; 528 fms; fine gray sand and mud; 12 Jun 1902.
- 3995: HAWAII: off Kauai, Mokuuae Islet, S 69° 30', E 11.5'; 427–676 fms; fine gray sand and rocks; 13 Jun 1902.
- 3997: HAWAII: off Kauai, Ukula Pt., S 79° 15', E 7.0'; 418–429 fms; fine gray sand and brown mud; 14 Jun 1902.
- 3998: HAWAII: off Kauai, Ukula Pt., S 71°, E 9.7'; 235–228 fms; coarse brown coral sand, shells and rocks; 14 Jun 1902.
- 4007: HAWAII: off Kauai, Ukula Pt., N 65° 30', W 7.4'; 508–557 fms; gray sand and foraminifera; 17 Jun 1902.
- 4019: HAWAII: off Kauai, Hanamaula Warehouse, S 43°, W 8.1'; 550–409 fms; gray sand, foraminifera and rocks; 21 Jun 1902.
- 4021: HAWAII: off Kauai, Hanamaula Warehouse, S 28° 30', W 9.5'; 286–399 fms; coral, sand, and foraminifera; 21 Jun 1902.
- 4022: HAWAII: off Kauai, Hanamaula Warehouse, S 30°, W 10.2'; 399–374 fms; coral, sand, foraminifera, and rocks; 21 Jun 1902.
- 4028: HAWAII: off Kauai, Ukula Pt., S 82° 30', E 10.2'; 444–478 fms; gray sand and globigerina; 24 Jun 1902.
- 4031: HAWAII: S coast of Oahu, Penguin Bank, Diamond Head Lt., N 20°, W 18'; 27–28 fms; coral, fine coral sand, and foraminifera; 9 Jul 1902.
- 4032: HAWAII: S coast of Oahu, Penguin Bank, Diamond Head Lt., N 19°, W 20'; 27–29 fms; fine coral sand and foraminifera; 9 Jul 1902.
- 4034: HAWAII: S coast of Oahu, Penguin Bank, Diamond Head Lt., N 19°, W 21.5'; 28–14 fms; fine coral sand and foraminifera; 9 Jul 1902.
- 4041: HAWAII: W coast of Hawaii, Kawaihae Lt., S 67° 30', E 10.0'; 282–253 fms; gray mud and foraminifera; 11 Jul 1902.
- 4044: HAWAII: W coast of Hawaii, Kawaihae Lt., S 80° 30', E 5.2'; 233–198 fms; fine gray sand; 11 Jul 1902.
- 4045: HAWAII: W coast of Hawaii, Kawaihae Lt., N 82° 30', E 4.1'; 198–147 fms; coral sand and foraminifera; 11 Jul 1902.
- 4062: HAWAII: NE coast of Hawaii, Kauhola Lt., S 69° 15', E 6.9'; 83–113 fms; coral, volcanic sand, shells, and foraminifera; 18 Jul 1902.
- 4066: HAWAII: Aleunihana Channel, Ka Lac-o Ilio Pt., Maui, N 79° 30', W 3.5'; 176–49 fms; rocky; 18 Jul 1902.
- 4072: HAWAII: N coast of Maui, Puniawa Pt., S 74° 30', E 7.1'; 56–59 fms; coarse coral sand and foraminifera; 19 Jul 1902.
- 4074: HAWAII: N coast of Maui, Puniawa Pt., S 70°, E 8.5'; 78–85 fms; coral sand and foraminifera; 19 Jul 1902.
- 4075: HAWAII: N coast of Maui, Puniawa Pt., S 79° 30', E 6.0'; 49–57 fms; fine gray sand and foraminifera; 21 Jul 1902.
- 4077: HAWAII: N coast of Maui, Puniawa Pt., S 45° 45', E 6.1'; 99–106 fms; fine coral sand and foraminifera; 21 Jul 1902.
- 4079: HAWAII: N coast of Maui, Puniawa Pt., S 31° 30', E 6'; 143–178 fms; gray sand and foraminifera; 21 Jul 1902.
- 4080: HAWAII: N coast of Maui, Puniawa Pt., S 23°, E 6.6'; 178–202 fms; gray sand and foraminifera; 21 Jul 1902.
- 4081: HAWAII: Maui, Puniawa Pt., S 17° 45', E 7.6'; 202–220 fms; gray sand and foraminifera; 21 Jul 1902.
- 4082: HAWAII: N coast of Maui, Puniawa Pt., S 11° 30', E 8.1'; 220–238 fms; gray sand; 21 Jul 1902.
- 4083: HAWAII: N coast of Maui, Puniawa Pt., S 4° 15', E 8.8'; 238–253 fms; gray sand; 21 Jul 1902.
- 4084: HAWAII: N coast of Maui, Puniawa Pt., S 3° 15', E 10.1'; 253–267 fms; fine gray sand; 21 Jul 1902.
- 4085: HAWAII: N coast of Maui, Puniawa Pt., S 2°, E 10.9'; 267–283 fms; sand and shells; 21 Jul 1902.
- 4086: HAWAII: N coast of Maui, Puniawa Pt., S 11.8'; 283–308 fms; sand and shells; 21 Jul 1902.
- 4087: HAWAII: NE approach to Pailolo Channel, Mokuhooniki Islet, S 85° 45', W 21.2'; 308–306 fms; fine gray sand; 21 Jul 1902.
- 4088: HAWAII: NE approach to Pailolo Channel, Mokuhooniki Islet, S 81° 30', W 20.1'; 306–297 fms; fine gray sand; 21 Jul 1902.
- 4089: HAWAII: Pailolo Channel, Mokuhooniki Islet, S 76°, W 20.3'; 297–304 fms; fine gray sand; 21–22 Jul 1902.
- 4090: HAWAII: Pailolo Channel, Mokuhooniki Islet, S 71° 15', W 20.7'; 304–308 fms; fine gray sand; 22 Jul 1902.
- 4095: HAWAII: NE approach to Pailolo Channel, Mokuhooniki Islet, S 61°, W 10.6'; 290–86 fms; brown mud, fine sand, and globigerina; 22 Jul 1902.
- 4096: HAWAII: Pailolo Channel, Mokuhooniki Islet, S 77° 30', W 7.0'; 272–286 fms; fine gray sand; 22 Jul 1902.
- 4098: HAWAII: N coast of Maui, Puniawa Pt., S 52° 30', E 6.5'; 95–152 fms; coral sand, foraminifera, and rocks; 23 Jul 1902.
- 4100: HAWAII: Pailolo Channel, Mokuhooniki Islet, N 35°, W 3.1'; 130–151 fms; coral sand, shale, and foraminifera; 23 Jul 1902.
- 4101: HAWAII: Pailolo Channel, Mokuhooniki Islet, N 8° 30', E 4.8'; 122–143 fms; coral sand, shells, and foraminifera; 23 Jul 1902.
- 4102: HAWAII: Pailolo Channel, Mokuhooniki Islet, N 29°, E 5.6'; 122–132 fms; fine gray sand and foraminifera; 23 Jul 1902.
- 4112: HAWAII: off Molokai, Kaiwi Channel, Lae-o Ka Laau Lt., S 19° 30', E 17.5'; 47–433 fms; fine sand; 24 Jul 1902.
- 4115: HAWAII: NW coast of Oahu, Kahuku Pt., N 83°, E 9.0'; 195–241 fms; coral sand and foraminifera; 25 Jul 1902.
- 4116: HAWAII: NW coast of Oahu, Kahuku Pt., N 86° 30', E 9.1'; 241–282 fms; coral sand and foraminifera; 25 Jul 1902.
- 4123: HAWAII: SW coast of Oahu, Barbers Pt. Lt., S 78°, E 3.2'; 352–357 fms; fine gray sand and mud; 26 Jul 1902.
- 4128: HAWAII: off Kauai, Hanamaula Warehouse, N 44° 30', W 2.6'; 253–268 fms; coarse brown coral sand and foraminifera; 1 Aug 1902.
- 4131: HAWAII: off Kauai, Hanamaula Warehouse, S 81° 30' W 2.2'; 309–257 fms; fine gray sand; 1 Aug 1902.
- 4132: HAWAII: off Kauai, Hanamaula Warehouse, S 37°, W 27'; 257–312 fms; fine gray sand and mud; 1 Aug 1902.
- 4134: HAWAII: off Kauai, Hanamaula Warehouse, S 35° 30' W 5.2'; 324–225 fms; fine coral and volcanic sand; 1 Aug 1902.
- 4139: HAWAII: off Kauai, Hanamaula Warehouse, S 57°, W 5.2'; 512–339 fms; fine gray sand and rocks; 2 Aug 1902.
- 4141: HAWAII: off Kauai, Hanamaula Warehouse, S 46°, W 6.2'; 437–632 fms; volcanic sand and foraminifera; 2 Aug 1902.
- 4144: HAWAII: off Kauai, Hanamaula Warehouse, S 55° 45', W 7.5'; 850–767 fms; fine gray sand; 2 Aug 1902.
- 4149: HAWAII: off Moku Manu (Bird Id.), center of Bird Id., S 7° 30', W 4.3'; 33–71 fms; coral and coralline; 5 Aug 1902.
- 4151: HAWAII: vicinity of Moku Manu (Bird Id.), center of Bird Id., S 32°, W 12.8'; 800–313 fms; fine coral sand, foraminifera, and stones; 5 Aug 1902.
- 4157: HAWAII: vicinity of Moku Manu (Bird Id.), center of Bird Id., S 77° 30', E 11.1'; 762–1000 fms; white mud, foraminifera, and rocks; 6–7 Aug 1902.
- 4164: HAWAII: off Moku Manu (Bird Id.), center of Bird Id., N 84°, E 18.5'; 40–56 fms; coral sand, pebbles, and shells; 8 Aug 1902.

- 4166: HAWAII: off Moku Manu (Bird Id.), center of Bird Id., S 86°, E 16.2'; 293–800 fms; coarse sand, foraminifera, and rocks; 8 Aug 1902.
- 4168: HAWAII: off Moku Manu (Bird Id.), center of Bird Id., N 80°, E 13'; 20–21 fms; coral sand and foraminifera; 8 Aug 1902.
- 4177: HAWAII: off Niihau Id., Kawahioa Pt., S 54°, W 17.5'; 451–319 fms; gray sand and globigerina; 12 Aug 1902.
- 4178: HAWAII: off Niihau Id., Kawahioa Pt., S 61° 30', W 17.6'; 319–378 fms; coral sand, rocks, and pebbles; 12 Aug 1902.
- 4181: HAWAII: off Kauai, Hanamaulu Warehouse, N 56°, W 6.6'; 811–671 fms; manganese, sand, and globigerina; 13 Aug 1902.
- 4201: CANADA: British Columbia, Vancouver Id., center of Round Id., S 62° W, 2.9 mi.; 138–145 fms; sand, green mud, and broken shells; 25 Jun 1903.
- 4202: CANADA: British Columbia, Queen Charlotte Sound, off Fort Rupert, center of Round Id., NW, 1.7 mi.; 36–25 fms; gray sand; 25 Jun 1903.
- 4203: CANADA: British Columbia, Vancouver Id., Queen Charlotte Sound, off Fort Rupert, center of Round Id., N 22° W, 1.5 mi.; 25–30 fms; volcanic sand, gravel, broken shells, and sponge; 25 Jun 1903.
- 4205: WASHINGTON: Admiralty Inlet, off Port Townsend, Admiralty Head Lt., N 38° W, 1.3 mi.; 26–15 fms; rocks and shells; 29 Jun 1903.
- 4236: ALASKA: vicinity of Yes Bay, Behm Canal, E end Square Id., Spacious Bay, S 34° W, 1.2 mi.; 147–205 fms; rocks and coarse sand; 8 Jul 1903.
- 4239: ALASKA: junction of Clarence Straits and Behm Canal, center of Guard Island, S 28° E, 2.1 mi.; 206–248 fms; coarse sand and rocks; 9 Jul 1903.
- 4246: ALASKA: Kasaan Bay, Prince of Wales Id., E end Long Id., N 55° W, 3 mi.; 123–101 fms; gray-green mud, coarse sand, and shells; 11 Jul 1903.
- 4272: ALASKA: Gulf of Alaska, Afognak Id., Afognak Bay, Lipssett Pt., S 15° E, 1.7 mi.; 12–17 fms; sticky mud; 3 Aug 1903.
- 4281: ALASKA: Chignik Bay, Tulumnit Pt., S 69° E, 9.2 mi.; 42–43 fms; green mud; 10 Aug 1903.
- 4305: CALIFORNIA: San Diego, Pt. Loma Lt., N 39° E, 9.6 mi.; 67–116 fms; gray sand and shells; 2 Mar 1904.
- 4307: CALIFORNIA: San Diego, Pt. Loma Lt., N 32° E, 10.6 mi.; 169–490 fms; fine sand and green mud; 2 Mar 1904.
- 4309: CALIFORNIA: San Diego, Pt. Loma Lt., N 41° E, 8.6 mi.; 67–78 fms; fine sand, shells, and rocks; 3 Mar 1904.
- 4310: CALIFORNIA: San Diego, Pt. Loma Lt., N 46° E, 8.1 mi.; 71–75 fms; green mud and fine sand; 3 Mar 1904.
- 4321: CALIFORNIA: San Diego, Soledad Hill, Pt. La Jolla, S 43° E, 3.1 mi.; 206 fms; dark green mud; 7 Mar 1904.
- 4334: CALIFORNIA: San Diego, Pt. Loma Lt., N 33° 30' E, 13.6 mi.; 525–541 fms; green mud and fine sand; 9 Mar 1904.
- 4335: CALIFORNIA: San Diego, Pt. Loma Lt., N 36° E, 14.1 mi.; 500–530 fms; green mud and fine sand; 9 Mar 1904.
- 4339: CALIFORNIA: San Diego, Pt. Loma Lt., N 36° E, 11.2 mi.; 241–369 fms; green mud; 10 Mar 1904.
- 4340: CALIFORNIA: San Diego vicinity, S point South Coronado Id., N 87° E, 1.8 mi.; 46–87 fms; fine gray sand, black specks, and gravel; 11 Mar 1904.
- 4341: CALIFORNIA: San Diego vicinity, S point South Coronado Id., N 79° E, 3.3 mi.; 188–323 fms; gray sand and black specks; 11 Mar 1904.
- 4343: CALIFORNIA: San Diego vicinity, S point South Coronado Id., S 60° E, 3.6 mi.; 55–155 fms; fine gray sand; 11 Mar 1904.
- 4345: CALIFORNIA: San Diego, Pt. Loma Lt., N 1° E, 12.4 mi.; 25 fms; gray sand; 11 Mar 1904.
- 4349: CALIFORNIA: San Diego, Pt. Loma Lt., NE 6.5 mi.; 75–134 fms; green mud and fine sand; 12 Mar 1904.
- 4352: CALIFORNIA: San Diego, Pt. Loma Lt., N 40° E, 13.4 mi.; 549–585 fms; green mud; 14 Mar 1904.
- 4353: CALIFORNIA: San Diego, Pt. Loma Lt., N 47° E, 14.7 mi.; 628–640 fms; green mud; 14 Mar 1904.
- 4354: CALIFORNIA: San Diego, Pt. Loma Lt., N 49° E, 15.6 mi.; 646–650 fms; green mud; 14 Mar 1904.
- 4362: CALIFORNIA: San Diego, Pt. Loma Lt., N 89° 30' E, 10.2 mi.; 100–159 fms; fine gray sand and black specks; 15 Mar 1904.
- 4363: CALIFORNIA: San Diego, Pt. Loma Lt., N 81° E, 11.1 mi.; 207–348 fms; green mud and fine sand; 15 Mar 1904.
- 4378: CALIFORNIA: San Diego, Pt. Loma Lt., N 57° E, 11 mi.; 376–594 fms; green mud and sand; 17 Mar 1904.
- 4380: CALIFORNIA: San Diego, S point North Coronado Id., N 59° E, 2.5 mi.; 530–618 fms; green mud and gray sand; 18 Mar 1904.
- 4381: CALIFORNIA: San Diego, S point North Coronado Id., N 64° E, 4 mi.; 618–667 fms; green mud; 18 Mar 1904.
- 4384: CALIFORNIA: San Diego, Pt. Loma Lt., N 68° E, 7.7 mi.; 85–164 fms; gray sand and rocks; 21 Mar 1904.
- 4387: CALIFORNIA: off San Diego (32° 32' 40" N, 118° 04' 20" W); 1059 fms; green mud; 22 Mar 1904.
- 4387a: CALIFORNIA: off San Diego (32° 32' 40" N, 118° 04' 20" W); 1059 fms; green mud; 22 Mar 1904.
- 4398: CALIFORNIA: between San Clemente and Santa Catalina Ids. (32° 43' 20" N, 117° 42' 10" W); 620 fms; green mud and rocks; 7 Apr 1904.
- 4400: CALIFORNIA: between San Diego and San Clemente Id. (32° 50' 20" N, 118° 03' 30" W); 500–507 fms; green mud; 8 Apr 1904.
- 4402: CALIFORNIA: San Clemente Id., E point, Northwest Harbor, N 74° W, 5.8 mi.; 542–599 fms; green mud; 8 Apr 1904.
- 4405: CALIFORNIA: San Clemente Id., E point, Northwest Harbor, S 72° W, 2.9 mi.; 654–704 fms; green mud; 9 Apr 1904.
- 4407: CALIFORNIA: Santa Catalina Id., SE point, N 19° 30' E, 3.2 mi.; 334–600 fms; gray sand and rocks; 9 Apr 1904.
- 4410: CALIFORNIA: Santa Catalina Id., Long Pt., N 79° W, 2.8 mi.; 178–195 fms; gray sand, gravel and rocks; 11 Apr 1904.
- 4412: CALIFORNIA: Santa Catalina Id., Bird Rock, S 69° W, 3 mi.; 265–274 fms; green mud, gravel, and rocks; 11 Apr 1904.
- 4413: CALIFORNIA: Santa Catalina Id., Bird Rock, S 15° E, 2.1 mi.; 152–162 fms; fine gray sand; 11 Apr 1904.
- 4415: CALIFORNIA: Santa Barbara Id., NE point, N 89° W, 8.6 mi.; 302–638 fms; green mud; 11 Apr 1904.
- 4416: CALIFORNIA: Santa Barbara Id., SW rock, N 49° W, 4.7 mi.; 323–448 fms; dark green mud and rocks; 12 Apr 1904.
- 4420: CALIFORNIA: E point San Nicolas Id., S 77° W, 5.7 mi.; 32–33 fms; fine gray sand; 12 Apr 1904.
- 4421: CALIFORNIA: E point San Nicolas Id., S 77° W, 5.7 mi.; 32–33 fms; fine gray sand; 12 Apr 1904.
- 4423: CALIFORNIA: E point San Nicolas Id., S 7.6 mi.; 216–339 fms; gray sand, black pebbles and shells; 13 Apr 1904.
- 4425: CALIFORNIA: E point San Nicolas Id., S 7° E, 21.8 mi.; 1100–1084 fms; green mud, fine sand, and globigerina; 13 Apr 1904.
- 4427: CALIFORNIA: Santa Cruz Id., Pt. San Pedro, N 35° E, 7 mi.; 447–510 fms; black mud and rocks; 14 Apr 1904.
- 4428: CALIFORNIA: Santa Cruz Id., Pt. San Pedro, N 34° E, 10.3 mi.; 764–891 fms; green mud; 14 Apr 1904.
- 4429: CALIFORNIA: S coast of Santa Cruz Id., Gull Islet, N 21° W, 2.9 mi.; 506–680 fms; green mud, black pebbles, and shells; 14 Apr 1904.

- 4430: CALIFORNIA: off Santa Cruz Id., Gull Islet, N 40° E, 2.7 mi.; 197–281 fms; black sand, pebbles, and rocks; 14 Apr 1904.
- 4431: CALIFORNIA: Santa Rosa Id., off Brockway Pt.; ca. 40 fms; 15 Apr 1904.
- 4432: CALIFORNIA: Santa Rosa Id., Brockway Pt., S 8 mi.; 272–270 fms; green mud; 15 Apr 1904.
- 4436: CALIFORNIA: San Miguel Id., Harris Pt., S 7° E, 9.8 mi.; 264–271 fms; green mud; 15 Apr 1904.
- 4441: CALIFORNIA: Monterey Bay, Pt. Pinos Lt., N 87° W, 1.7 mi.; 35–28 fms; black mud, sand, and shells; 10 May 1904.
- 4452: CALIFORNIA: Monterey Bay, Pt. Pinos Lt., S 21° W, 3.4 mi.; 49–50 fms; green mud and fine sand; 11 May 1904.
- 4457: CALIFORNIA: Monterey Bay, Pt. Pinos Lt., S 21° W, 6.1 mi.; 40–46 fms; dark green mud; 12 May 1904.
- 4471: CALIFORNIA: Monterey Bay, Pt. Pinos Lt., S 33° E, 5.3 mi.; 144–65 fms; gray sand and rocks; 14 May 1904.
- 4492: CALIFORNIA: Monterey Bay, Santa Cruz Lt., N 54° W, 7 mi.; 26–27 fms; soft green mud and rocks; 18 May 1904.
- 4528: CALIFORNIA: Monterey Bay, Pt. Pinos Lt., S 58° E, 12.7 mi.; 766–800 fms; soft gray mud; 27 May 1904.
- 4530: CALIFORNIA: Monterey Bay, Pt. Pinos Lt., S 78° E, 6.8 mi.; 847–755 fms; soft gray mud; 27 May 1904.
- 4540: CALIFORNIA: Monterey Bay, Pt. Pinos Lt., SE 11.2 mi.; 551–389 fms; green mud; 1 Jun 1904.
- 4550: CALIFORNIA: Monterey Bay, Pt. Pinos Lt., S 6° E, 4.6 mi.; 50–57 fms; green mud and rocks; 7 Jun 1904.
- 4552: CALIFORNIA: Monterey Bay, Pt. Pinos Lt., S 73° E, 4 mi.; 73–66 fms; green mud and rocks; 9 Jun 1904.
- 4555: CALIFORNIA: Monterey Bay, Pt. Pinos Lt., S 63° E, 3.4 mi.; 66–69 fms; green mud and rocks; 9 Jun 1904.
- 4557: CALIFORNIA: Monterey Bay, Pt. Pinos Lt., S 25° W, 3.1 mi.; 53–54 fms; rocks; 9 Jun 1904.
- 4559: CALIFORNIA: Monterey Bay, Pt. Pinos Lt., N 76° W, 2.3 mi.; 22–8 fms; fine gray sand; 9 Jun 1904.
- 4562: CALIFORNIA: Monterey Bay, Santa Cruz Lt., N 72° W, 8.1 mi.; 10–11 fms; hard sand and rocks; 11 Jun 1904.
- 4563: CALIFORNIA: Monterey Bay, Santa Cruz Lt., N 87° W, 1.9 mi.; 8 fms; rocky; 11 Jun 1904.
- 4765: ALASKA: Aleutian Ids.; W point Yunaska Id., S 37° E, 43.5 mi. (53° 12' N, 171° 37' W); 1217 fms; fine black sand; 29 May 1906.
- 4772: BERING SEA: Bowers Bank (54° 30' 30" N, 179° 14' E); 344–372 fms; green-brown sand; 4 Jun 1906.
- 4775: BERING SEA: Bowers Bank, (54° 33' 30" N, 178° 44' E); 584 fms; green mud with black specks and foraminifera; 4 Jun 1906.
- 4777: BERING SEA: Petral Bank, Semisopochnoi Id., r.t.S. 44° W, l.t.S. 4° W, ca. 12 mi. (52° 11' N, 179° 49' E); 52–43 fms; fine gravel; 5 Jun 1906.
- 4779: BERING SEA: Petral Bank, Semisopochnoi Id., r.t.S. 59 1/2° W, l.t.S. 37° W (52° 11' N, 179° 57' W); 54–56 fms; broken shells, pebbles, and sand; 5 Jun 1906.
- 4784: ALASKA: Aleutian Ids., E cape, Attu Id., S 18° W, 4 mi. (52° 55' 04" N, 173° 26' E); 135 fms; coarse pebbles; 11 Jun 1906.
- 4787: BERING SEA: N point Copper Id., N 79° E, 8.5 mi. (54° 50' 50" N, 167° 13' 30" E); 54–57 fms; green sand; 14 Jun 1906.
- 4792: BERING SEA: Bering Id., Cape Monati, N 50° W, 8.2 mi. (54° 36' 15" N, 166° 57' 15" E); 72 fms; pebbles; 14 Jun 1906.
- 4796: KAMCHATKA: Sea of Okhotsk, Staritschko Id., S 71° W, 4 mi. (52° 47' N, 158° 43' 30" E); 48 fms; sand, pebbles, and shells; 20 Jun 1906.
- 4803: USSR: Sea of Okhotsk, Kuril Islands, Simushir Island, Cape Rollin, N 59° W, 9 mi. (46° 42' N, 151° 45' E); 229 fms; coarse pebbles and black sand; 24 Jun 1906.
- 4804: USSR: Sea of Okhotsk, Kuril Islands; Simushir Island, Cape Rollin, N 58° W, 9.7 mi. (46° 42' N, 151° 47' E); 229 fms; coarse pebbles and black sand; 24 Jun 1904.
- 4808: JAPAN: Cape Tsiuka, S 61° W, 10.6 mi. (41° 35' 50" N, 140° 36' 45" E); 47 fms; sand, shells, and coarse gravel; 16 Jul 1906.
- 4818: JAPAN: Hime Saki Lt., S 24° E, 4 mi. (38° 08' 55" N, 138° 31' 30" E); 225–245 fms; fine brown mud; 19 Jul 1906.
- 4855: JAPAN: Sea of Japan; Cape Clonard, N 36° W, 5.5 mi. (36° 01' 30" N, 129° 42' E); 70–89 fms; green mud; 30 Jul 1906.
- 4867: JAPAN: (36° 31' N, 129° 46' E); 150 fms; green mud and fine gray sand; 1 Aug 1906.
- 4871: JAPAN: (36° 29' 30" N, 129° 43' 30" E); 60 fms; 1 Aug 1906.
- 5024: USSR: Sea of Okhotsk, off E coast of Sachalin Id., Flat Hill, N 48° W, Cape Patience S 74° W (40° 43' 10" N, 144° 59' 30" E); 67 fms; sand and pebbles; 27 Sep 1906.
- 5049: JAPAN: Honshu, Kinka San Lt., N 76.5° W, 21 mi. (38° 12' N, 142° 02' E); 182 fms; dark gray sand, broken shells, and foraminifera; 10 Oct 1906.
- 5050: JAPAN: Honshu, Kinka San Lt., N 78° W, 25.7 mi. (38° 11' 30" N, 142° 08' E); 266 fms; dark gray sand, broken shells, and foraminifera; 10 Oct 1906.
- 5104: PHILIPPINES: off S Luzon, Sueste Pt. Lt., S 58° W, 1.3 mi. (14° 45' 48" N, 120° 12' 20" E); 33 fms; 8 Jan 1908.
- 5107: PHILIPPINES: off S Luzon, Corregidor Lt., S 17° E, 1.75 mi. (14° 24' 30" N, 120° 33' 40" E); 28 fms; gray mud; 9 Jan 1908.
- 5109: PHILIPPINES: off S Luzon, Corregidor Lt., N 42° E, 25.8 mi. (14° 03' 45" N, 120° 16' 30" E); 10 fms; coral; 15 Jan 1908.
- 5111: PHILIPPINES: off S Luzon, Sombrero Id., S 41° E, 4.5 mi. (13° 45' 15" N, 120° 46' 30" E); 236 fms; green mud; 16 Jan 1908.
- 5112: PHILIPPINES: Sombrero Id., S 18° E, 6.75 mi. (13° 48' 22" N, 120° 47' 25" E); 177 fms; dark green mud; 17 Jan 1908.
- 5114: PHILIPPINES: Sombrero Id., N 36° E, 7.2 mi. (13° 36' 11" N, 120° 45' 26" E); 340 fms; fine sand; 20 Jan 1908.
- 5115: PHILIPPINES: Sombrero Id., N 49° E, 7.3 mi. (13° 37' 11" N, 120° 43' 40" E); 340 fms; 20 Jan 1908.
- 5116: PHILIPPINES: off S Luzon, Sombrero Id., N 69° E, 2.5 mi. (13° 41' N, 120° 47' 05" E); 200 fms; 20 Jan 1908.
- 5117: PHILIPPINES: Sombrero Id., S 17° E, 10.8 mi. (13° 52' 22" N, 120° 46' 22" E); 118 fms; dark green mud; 21 Jan 1908.
- 5121: PHILIPPINES: E coast of Mindoro, Malabrigo Lt., N 14° W, 9 mi. (13° 27' 20" N, 121° 17' 45" E); 108 fms; dark green mud; 2 Feb 1908.
- 5122: PHILIPPINES: E coast of Mindoro, Malabrigo Lt., N 46° W, 20.6 mi. (13° 21' 30" N, 120° 30' 33" E); 220 fms; green mud; 2 Feb 1908.
- 5123: PHILIPPINES: E coast of Mindoro, Malabrigo Lt., N 44° W, 32.5 mi. (13° 12' 45" N, 121° 38' 45" E); 283 fms; green mud; 2 Feb 1908.
- 5124: PHILIPPINES: E coast of Mindoro, Pt. Origen (N), S 56° E, 20.75 mi. (12° 52' N, 121° 48' 30" E); 281 fms; soft green mud; 2 Feb 1908.
- 5126: PHILIPPINES: Sulu Sea, off S Panay, Nogas Id. (W) S 26° 30' E, 11.75 mi. (10° 34' 45" N, 121° 47' 30" E); 742 fms; soft green mud; 3 Feb 1908.
- 5146: PHILIPPINES: Sulu Archipelago, off Siasi, Sulade Id. (E), N 18° W, 3.4 mi. (5° 46' 40" N, 120° 48' 50" E); 24 fms; coral sand and shells; 16 Feb 1908.
- 5149: PHILIPPINES: Sulu Archipelago, off Siasi, Sirun Id. (W), N 39° E, 2.4 mi. (5° 33' N, 120° 42' 10" E); 10 fms; coral and shells; 18 Feb 1908.
- 5156: PHILIPPINES: Sulu Archipelago, Tawi Tawi Group, Tinakta Id. (N), S 77° W, 3.4 mi. (5° 12' 50" N, 119° 55' 55" E); 18 fms; fine sand and shells; 21 Feb 1908.

- 5157: PHILIPPINES: Sulu Archipelago, Tawi Tawi Group, Tinakta Id. (N), S 80° W, 3.3 mi. (5° 12' 30" N, 119° 55' 50" E); 18 fms; fine sand; 21 Feb 1908.
- 5158: PHILIPPINES: Sulu Archipelago, Tawi Tawi Group, Tinakta Id. (N), N 89° W, 1.9 mi. (5° 12' N, 119° 54' 30" E); 12 fms; coarse sand and shells; 21 Feb 1908.
- 5159: PHILIPPINES: Sulu Archipelago, Tawi Tawi Group, Tinakta Id. (N), N 82° W, 1.4 mi. (5° 11' 50" N, 119° 54' E); 10 fms; coarse sand; 21 Feb 1908.
- 5161: PHILIPPINES: Sulu Archipelago, Tawi Tawi Group, Tinakta Id. (E), N 12° W, 1.8 mi. (5° 10' 15" N, 119° 53' E); 16 fms; fine sand and black specks; 22 Feb 1908.
- 5164: PHILIPPINES: Sulu Archipelago, Tawi Tawi Group, Observation Id., S 82° W, 8 mi. (5° 01' 40" N, 119° 52' 20" E); 18 fms; green mud; 24 Feb 1908.
- 5165: PHILIPPINES: Sulu Archipelago, Tawi Tawi Group, Observation Id., N 70° W, 6.4 mi. (4° 58' 20" N, 119° 50' 30" E); 9 fms; coral; 24 Feb 1908.
- 5181: PHILIPPINES: off E Panay, Antonia Id. (S), S 63° W, 6.6 mi. (11° 36' 40" N, 123° 26' 35" E); 26 fms; mud and fine sand; 27 Mar 1908.
- 5182: PHILIPPINES: off E Panay, Antonia Id. (S), N 43° W, 3.7 mi. (11° 30' 40" N, 123° 23' 20" E); 24 fms; fine sand and mud; 27 Mar 1908. 5183: PHILIPPINES: between Panay and Negros Ibs., Lusanan Lt., S 29° E, 4 mi. (10° 32' 48" N, 122° 26' E); 96 fms; soft green mud; 30 Mar 1908.
- 5197: PHILIPPINES: off W Bohol, Balicasag Id., S 22 mi. (9° 52' 30" N, 123° 40' 45" E); 174 fms; green mud; 9 Apr 1908.
- 5198: PHILIPPINES: off W Bohol, Balicasag Id., S 6° E, 10.25 mi. (9° 40' 50" N, 123° 39' 45" E); 220 fms; green mud; 9 Apr 1908.
- 5207: PHILIPPINES: off W Samar, Badian Id. (N), S 74° E, 4.7 mi. (11° 38' 05" N, 124° 40' 45" E); 35 fms; green mud and sand; 14 Apr 1908.
- 5208: PHILIPPINES: off W Samar, Taratara Id. (N), S 67° 30' E, 4.1 mi. (11° 45' 53" N, 124° 42' 50" E); 26 fms; soft green mud; 14 Apr 1908.
- 5209: PHILIPPINES: off W Samar, Taratara Id. (N), S 53° W, 1.8 mi. (11° 45' 25" N, 124° 48' 05" E); 20 fms; green mud; 14 Apr 1908.
- 5212: PHILIPPINES: E of Masbate Id., Panalangan Pt., S 54° 30' E, 14.5 mi. (12° 04' 15" N, 124° 04' 36" E); 108 fms; gray sand and mud; 20 Apr 1908.
- 5215: PHILIPPINES: E of Masbate Id., Palanog Lt., S 5° 30' E, 8.5 mi. (12° 31' 30" N, 123° 35' 24" E); 604 fms; green mud; 21 Apr 1908.
- 5217: PHILIPPINES: between Burias and Luzon Ibs., Anima Sola Id. N 42° W, 17.3 mi. (13° 20' N, 123° 14' 15" E); 105 fms; coarse gray sand; 22 Apr 1908.
- 5219: PHILIPPINES: between Marinduque and Luzon Ibs., Mompog Id. (NE), N 35° 30' W, 12.25 mi. (13° 21' N, 122° 18' 45" E); 530 fms; green mud; 23 Apr 1908.
- 5235: PHILIPPINES: E coast of Mindanao, Nagubat Id. (S), S 58° W, 7 mi. (9° 43' N, 125° 48' 15" E); 44 fms; soft mud; 9 May 1908.
- 5249: PHILIPPINES: Gulf of Davao, Lanang Pt., N 1 mi. (7° 06' 06" N, 125° 40' 08" E); 23 fms; coral and sand; 18 May 1908.
- 5256: PHILIPPINES: off S Mindanao, Utara Pt., Bongo Id., N 76° W, 2.8 mi. (7° 21' 45" N, 124° 07' 15" E); 158 fms; mud; 22 May 1908.
- 5258: PHILIPPINES: off S Panay, Jurajurao Id. (S), S 75° W, 16.25 mi. (10° 27' 45" N, 122° 12' 30" E); 2 Jun 1908.
- 5259: PHILIPPINES: off NW Panay, Caluya Id. (S), S 73° W, 12 mi. (11° 57' 30" N, 121° 42' 15" E); 312 fms; gray mud and globigerina; 3 Jun 1908.
- 5260: PHILIPPINES: off S Mindoro, Balanja Pt., N 28° W, 7.2 mi. (12° 25' 35" N, 121° 31' 35" E); 234 fms; green mud and sand; 3 Jun 1908.
- 5265: PHILIPPINES: Luzon, Matabat Pt., S 17° E, 3.3 mi. (13° 41' 15" N, 120° 00' 50" E); 135 fms; sand and mud; 6 Jun 1908.
- 5268: PHILIPPINES: Luzon, Matabat Pt., S 50° E, 5.8 mi. (13° 42' N, 120° 57' 15" E); 170 fms; sand and pebbles; 8 Jun 1908.
- 5273: PHILIPPINES: off S Luzon, Corregidor Lt., N 27° E, 27.25 mi. (13° 58' 45" N, 120° 21' 35" E); 114 fms; mud, shells and coral sand; 14 Jul 1908.
- 5274: PHILIPPINES: off S Luzon, Malavatuan Id. (N), S 73° 30' E, 17.5 mi. (13° 57' 30" N, 120° 03' 25" E); 525 fms; gray mud and sand; 16 Jul 1908.
- 5278: PHILIPPINES: off S Luzon, Malavatuan Id. (N), S 23° E, 8.5 mi. (14° 00' 10" N, 120° 17' 15" E); 102 fms; fine sand, mud, and shells; 17 Jul 1908.
- 5279: PHILIPPINES: off S Luzon, Malavatuan Id. (W), S 18° W, 5.4 mi. (13° 57' 30" N, 120° 22' 15" E); 117 fms; green mud; 17 Jul 1908.
- 5281: PHILIPPINES: off S Luzon, Malavatuan Id. (N), S 84° W, 4.3 mi. (13° 52' 45" N, 120° 25' E); 201 fms; dark gray sand; 18 Jul 1908.
- 5282: PHILIPPINES: off S Luzon, Malavatuan Id. (N), S 84° W, 6.2 mi. (13° 53' N, 120° 26' 45" E); 248 fms; dark gray sand; 18 Jul 1908.
- 5289: PHILIPPINES: off S Luzon, Matabat Pt., S 42° E, 5 mi., (13° 41' 50" N, 120° 58' 30" E); 172 fms; broken shells and sand; 22 Jul 1908.
- 5290: PHILIPPINES: off S Luzon, Matabat Pt., S 50° E, 3.1 mi.: (13° 40' 09" N, 120° 59' 30" E); 214 fms; lava and gravel; 22 Jul 1908.
- 5297: PHILIPPINES: off S Luzon, Matabat Pt., S 50° E, 5.1 mi. (13° 41' 20" N, 120° 58' E); 198 fms; mud and sand; 24 Jul 1908.
- 5298: PHILIPPINES: off S Luzon, Matabat Pt., S 38° E, 6.7 mi. (13° 43' 25" N, 120° 57' 40" E); 140 fms; sand; 24 Jul 1908.
- 5301: EAST CHINA SEA: off Hong Kong (20° 37' N, 115° 43' E); 208 fms; gray mud and sand; 8 Aug 1908.
- 5325: PHILIPPINES: off N Luzon, Hermanos Id. (N), N 86° E, 16.75 mi. (18° 34' 15" N, 121° 51' 15" E); 224 fms; green mud; 12 Nov 1908.
- 5326: PHILIPPINES: off N Luzon, Hermanos Id. (N), N 69° E, 8 mi.: (18° 32' 30" N, 122° 01' E); 230 fms; mud; 12 Nov 1908.
- 5329: PHILIPPINES: off N Luzon, Font Id. (W), N 28° E, 24.25 mi. (18° 33' N, 121° 37' 30" E); 212 fms; black mud; 19 Nov 1908.
- 5342: PHILIPPINES: Palawan Id., Endeavor Pt. (S), S 58° E, 0.5 mi. (10° 56' 55" N, 119° 17' 24" E); 14-25 fms; gray mud; 23 Dec 1908.
- 5348: PHILIPPINES: Palawan Passage, Pt. Tabonan, S 89° E, 33.5 mi. (10° 57' 45" N, 118° 38' 15" E); 375 fms; coral and sand; 27 Dec 1908.
- 5349: PHILIPPINES: Palawan Passage, Pt. Tabonan, N 85° E, 45.2 mi. (10° 54' N, 118° 26' 20" E); 730 fms; coral sand; 27 Dec 1908.
- 5358: PHILIPPINES: Jolo Sea, Sandakan Lt., S 34° W, 19.7 mi. (6° 06' 40" N, 118° 18' 15" E); 39 fms; mud; 7 Jan 1909.
- 5363: PHILIPPINES: Luzon Id., Balayan Bay; Cape Santiago Lt., S 79° W, 4.5 mi. (13° 47' 20" N, 120° 43' 30" E); 180 fms; 20 Feb 1909.

- 5365: PHILIPPINES: Luzon Id., Balayan Bay, Cape Santiago Lt., N 73° W, 6.7 mi. (13° 44' 24" N, 120° 45' 30" E); 214 fms; 22 Feb 1909.
- 5369: PHILIPPINES: off Marinduque, Tayabas Lt. (Outer), N 50° W, 8.8 mi. (13° 48' N, 121° 43' E); 106 fms; black sand; 24 Feb 1909.
- 5371: PHILIPPINES: Marinduque Id., Tayabas Lt. (Outer), N 43° W, 6 mi. (13° 49' 40" N, 121° 40' 15" E); 83 fms; green mud; 24 Feb 1909.
- 5375: PHILIPPINES: off Marinduque, Tayabas Lt. (Outer), N 49° W, 18.2 mi. (13° 42' 15" N, 121° 50' 15" E); 107 fms; green mud; 2 Mar 1909.
- 5388: PHILIPPINES: between Burias and Luzon Ids., Bagatao Id. Lt. (Outer), S 86° E, 21 mi. (12° 51' 30" N, 123° 26' 15" E); 226 fms; soft green mud; 11 Mar 1909.
- 5391: PHILIPPINES: between Samar and Masbate Ids., Tubig Pt., Destacado Id., N 31° E, 3 mi. (12° 13' 15" N, 124° 05' 03" E); 118 fms; rocks and coral; 13 Mar 1909.
- 5392: PHILIPPINES: between Samar and Masbate Ids., Tubig Pt., Destacado Id., N 49° E, 5 mi. (12° 12' 35" N, 124° 02' 48" E); 135 fms; green mud and sand; 13 Mar 1909.
- 5393: PHILIPPINES: between Samar and Masbate Ids., Panganalan Pt., Talajit Id., S 59° E, 14.8 mi. (12° 03' 30" N, 124° 03' 36" E); 136 fms; hard sand; 13 Mar 1909.
- 5394: PHILIPPINES: between Samar and Masbate Id., Panalangen Pt., Talajit Id., S 68° E, 8.1 mi. (12° 00' 30" N, 124° 05' 36" E); 153 fms; green mud; 13 Mar 1909.
- 5411: PHILIPPINES: between Cebu and Bohol Ids., Lauis Pt. Lt., N 35° E, 4.7 mi. (10° 10' 30" N, 123° 51' 15" E); 145 fms; green mud; 23 Mar 1909.
- 5412: PHILIPPINES: between Cebu and Bohol Ids., Lauis Pt. Lt., N 21° E, 5.5 mi. (10° 09' 15" N, 123° 52' E); 162 fms; green mud; 23 Mar 1909.
- 5416: PHILIPPINES: between Cebu and Bohol Ids., Lauis Pt. Lt., N 12° E, 2.9 mi. (10° 11' 30" N, 123° 53' 30" E); 150 fms; green mud; 25 Mar 1909.
- 5417: PHILIPPINES: between Cebu and Bohol Ids., Lauis Pt. Lt., N 10° E, 3.5 mi. (10° 10' N, 123° 53' 15" E); 165 fms; gray mud and sand; 25 Mar 1909.
- 5418: PHILIPPINES: between Cebu and Bohol Ids., Lauis Pt. Lt., N 16° E, 5.6 mi. (10° 08' 50" N, 123° 52' 30" E); 159 fms; gray mud and sand; 25 Mar 1909.
- 5419: PHILIPPINES: between Cebu and Bohol Ids., Lauis Pt. Lt., N 27° E, 17.8 mi. (9° 58' 30" N, 123° 46' E); 175 fms; green mud; 25 Mar 1909.
- 5420: PHILIPPINES: between Cebu and Bohol Ids., Cruz Pt. (Bohol), S 20° E, 6 mi. (9° 49' 35" N, 123° 45' E); 127 fms; 25 Mar 1909.
- 5423: PHILIPPINES: Jolo Sea, Cagayan Id. (S), S 11° E, 4.8 mi. (9° 38' 30" N, 121° 11' E); 508 fms; gray mud and coral sand; 31 Mar 1909.
- 5424: PHILIPPINES: Jolo Sea, Cagayan Id. (S), S 11° W, 3.4 mi. (9° 37' 05" N, 121° 12' 37" E); 340 fms; coral sand; 31 Mar 1909.
- 5425: PHILIPPINES: Cagayan Id. (S), S 14° E, 4 mi. (9° 37' 45" N, 121° 11' E); 495 fms; gray mud and coral sand; 31 Mar 1909.
- 5428: PHILIPPINES: vicinity E Palawan, 30th of June Id., N 62° W, 19.5 mi. (9° 13' N, 118° 51' 15" E); 1105 fms; gray mud; 3 Apr 1909.
- 5432: PHILIPPINES: Corandagos Id. (NW), N 30° E, 5.7 mi. (10° 37' 50" N, 120° 12' E); 51 fms; sand; 8 Apr 1909.
- 5440: PHILIPPINES: W coast of Luzon, San Fernando Pt. Lt., N 82° E, 23.1 mi. (16° 33' 52" N, 119° 52' 54" E); 172 fms; fine gray sand and globigerina; 10 May 1909.
- 5444: PHILIPPINES: E coast of Luzon, Batag Id., Atalaya Pt., S 65° E, 5.1 mi. (12° 43' 51" N, 124° 58' 50" E); 308 fms; green mud; 3 Jun 1909.
- 5445: PHILIPPINES: Batag Id., Atalaya Pt., S 56° E, 5.3 mi. (12° 44' 42" N, 124° 59' 50" E); 383 fms; green mud and sand; 3 Jun 1909.
- 5453: PHILIPPINES: E coast of Luzon, Legaspi Lt., S 58° W, 4.5 mi. (13° 12' N, 123° 49' 18" E); 146 fms; 7 Jun 1909.
- 5460: PHILIPPINES: E coast of Luzon, Sialat Pt. Lt., N 24° E, 8.2 mi. (13° 32' 30" N, 123° 58' 06" E); 565 fms; gray mud; 10 Jun 1909.
- 5467: PHILIPPINES: Atulayan Id. (S), S 79° W, 2.5 mi. (13° 35' 27" N, 123° 37' 18" E); 480 fms; gray mud; 18 Jun 1909.
- 5470: PHILIPPINES: E coast of Luzon, Atulayan Id. (E), S 68° W, 6.7 mi. (13° 37' 30" N, 123° 41' 09" E); 560 fms; mud; 18 Jun 1909.
- 5476: PHILIPPINES: San Bernardino Lt., S 37° W, 13.5 mi. (12° 56' 24" N, 124° 25' 24" E); 270 fms; fine sand; 24 Jun 1909.
- 5483: PHILIPPINES: between Samar and Leyte Ids., Caguban Grande Id. (N), N 88° W, 5.7 mi. (10° 27' 30" N, 125° 19' 15" E); 74 fms; sand and broken shells; 30 Jul 1909.
- 5487: PHILIPPINES: between Leyte and Mindanao Ids., San Ricardo Pt. (Panaon Id.) S 50° E, 11.2 mi. (10° 02' 45" N, 125° 05' 33" E); 732 fms; green mud; 31 Jul 1909.
- 5491: PHILIPPINES: between Leyte and Mindanao Ids., Diuata Pt. (W), S 9° W, 19.3 mi. (9° 24' N, 125° 12' E); 736 fms; green mud and coral; 1 Aug 1909.
- 5499: PHILIPPINES: off N Mindanao, Macabalan Pt. Lt., S 20° E, 11.6 mi. (8° 41' 30" N, 124° 35' 40" E); 554 fms; green mud and fine sand; 4 Aug 1909.
- 5501: PHILIPPINES: N Mindanao, Macabalan Pt. Lt., S 35° E, 8.2 mi. (8° 37' 37" N, 124° 35' E); 214 fms; fine sand and gray mud; 4 Aug 1909.
- 5503: PHILIPPINES: N Mindanao, Macabalan Pt. Lt., S 31° E, 6.6 mi. (8° 36' 26" N, 124° 36' 08" E); 226 fms; green mud; 4 Aug 1909.
- 5505: PHILIPPINES: N Mindanao, Macabalan Pt. Lt., S 31° E, 7.7 mi. (8° 37' 15" N, 124° 36' E); 220 fms; 5 Aug 1909.
- 5510: PHILIPPINES: N Mindanao, Camp Overton Lt., S 68° E, 9.1 mi. (8° 16' N, 124° 03' 50" E); 423 fms; gray mud and fine sand; 7 Aug 1909.
- 5513: PHILIPPINES: N Mindanao Id., Camp Overton Lt., S 67° E, 10.3 mi. (8° 16' 45" N, 124° 02' 48" E); 505 fms; gray mud and fine sand; 7 Aug 1909.
- 5518: PHILIPPINES: Mindanao Id., Pt. Tagolo Lt., S 64° W, 8.7 mi. (8° 48' N, 123° 31' E); 200 fms; gray mud and globigerina; 9 Aug 1909.
- 5519: PHILIPPINES: N Mindanao Id., Pt. Tagolo Lt., S 71° W, 8.7 mi. (8° 47' N, 123° 31' 15" E); 182 fms; globigerina and sand; 9 Aug 1909.
- 5520: PHILIPPINES: N Mindanao Id., Pt. Tagolo Lt., N 48° E, 4.5 mi. (8° 41' 15" N, 123° 18' 30" E); 102 fms; 10 Aug 1909.
- 5526: PHILIPPINES: Balicasag Id. (C), N 15° W, 18.4 mi. (9° 12' 45" N, 123° 45' 30" E); 805 fms; green mud and globigerina; 11 Aug 1909.
- 5527: PHILIPPINES: between Siquijor and Bohol Ids., Balicasag Id. (C), N 14° W, 8.2 mi. (9° 22' 30" N, 123° 42' 40" E); 392 fms; globigerina ooze; 11 Aug 1909.
- 5528: PHILIPPINES: between Siquijor and Bohol Ids., Balicasag Id. (C), N 11° W, 18.2 mi. (9° 12' 30" N, 123° 44' 07" E); 429 fms; gray mud; 11 Aug 1909.
- 5529: PHILIPPINES: between Siquijor and Bohol Ids., Balicasag Id. (C), N 11° E, 6.9 mi. (9° 23' 45" N, 123° 39' 30" E); 441 fms; gray mud and globigerina; 11 Aug 1909.

- 5536: PHILIPPINES: between Negros and Siquijor, Apo Id. (C), S 26° W, 11.8 mi. (9° 15' 45" N, 123° 22' 00" E); 279 fms; green mud; 19 Aug 1909.
- 5537: PHILIPPINES: between Negros and Siquijor Ids., Apo Id. (C), S 46° W, 8.7 mi. (9° 11' N, 123° 23' E); 254 fms; green mud; 19 Aug 1909.
- 5538: PHILIPPINES: between Negros and Siquijor Ids., Apo Id. (C), S 64° W, 7.3 mi. (9° 08' 15" N, 123° 23' 20" E); 256 fms; green mud and sand; 19 Aug 1909.
- 5541: PHILIPPINES: N Mindanao Id., Tagolo Lt., S 65° W, 12.7 mi. (8° 49' 38" N, 123° 34' 30" E); 219 fms; fine sand and broken shells; 20 Aug 1909.
- 5543: PHILIPPINES: N Mindanao Id., Tagolo Lt., S 75° W, 12.5 mi. (8° 47' 15" N, 123° 35' E); 162 fms; sand; 20 Aug 1909.
- 5550: PHILIPPINES: Jolo Id., Jolo Lt., N 83° E, 15.5 mi. (6° 02' N, 120° 44' 40" E); 258 fms; line sand and shells; 17 Sep 1909.
- 5565: PHILIPPINES: between Jolo Sea and Tawi Tawi Group, Dammi Id. (N), S 69° W, 6 mi. (5° 51' 42" N, 120° 30' 30" E); 243 fms; sand and pteropod shells; 21 Sep 1909.
- 5585: BORNEO: Sibuko Bay, Sipadan Id. (M), S 89° W, 12 mi. (4° 07' N, 118° 49' 54" E); 476 fms; gray mud; 28 Sep 1909.
- 5586: BORNEO: Sibuko Bay, Sipadan Id. (M), W 9.4 mi. (4° 06' 50" N, 118° 47' 20" E); 347 fms; gray mud; 28 Sep 1909.
- 5587: BORNEO: Sibuko Bay, Sipadan Id. (W), S 12° E, 3.8 mi. (4° 10' 35" N, 118° 37' 12" E); 415 fms; green mud, sand, and coral; 28 Sep 1909.
- 5589: BORNEO: Mabul Id. (NW), N 3° W, 2.8 mi. (4° 12' 10" N, 118° 38' 08" E); 260 fms; fine gray sand and gray mud; 29 Sep 1909.
- 5605: CELEBES: Gulf of Tomini, Dodepo Id. (W), N 14° W, 5.9 mi. (0° 21' 33" N, 121° 34' 10" E); 647 fms; 16 Nov 1909.
- 5606: CELEBES: Gulf of Tomini, Dodepo Id. (W), N 3° W, 10.8 mi. (0° 16' 28" N, 121° 33' 30" E); 834 fms; green mud; 17 Nov 1909.
- 5607: CELEBES: Gulf of Tomini, Binang Unang Id. (E), S 36° E, 5 mi. (0° 04' S, 121° 36' E); 761 fms; fine sand; 18 Nov 1909.
- 5608: CELEBES: Gulf of Tomini, Binang Unang Id. (peak), S 87° E, 19 mi. (0° 08' S, 121° 19' E); 1089 fms; gray mud; 18 Nov 1909.
- 5609: CELEBES: Gulf of Tomini, Binang Unang Id. (N), N 80° E, 21 mi. (0° 11' S, 121° 16' E); 1092 fms; green mud; 18 Nov 1909.
- 5618: MOLUCCAS ISLANDS: Molucca Passage, March Id., S 69° E, 7.8 mi. (0° 37' N, 127° 15' E); 417 fms; gray mud; 27 Nov 1909.
- 5619: MOLUCCAS ISLANDS: Molucca Passage, March Id. (S), S 78° E, 7 mi. (0° 35' N, 127° 14' 40" E); 435 fms; fine gray sand and mud; 27 Nov 1909.
- 5622: MOLUCCAS ISLANDS: Makyan Id. (NE), N 66° W, 4.1 mi. (0° 19' 20" N, 127° 28' 30" E); 275 fms; gray mud; 29 Nov 1909.
- 5623: MOLUCCAS ISLANDS: Makyan Id. (S), S 88° W, 7.5 mi. (0° 16' 30" N, 127° 30" E); 272 fms; fine sand and mud; 29 Nov 1909.
- 5624: MOLUCCAS ISLANDS: Makyan Id. (S), N 67° W, 8.9 mi. (0° 12' 15" N, 127° 29' 30" E); 288 fms; fine sand and mud; 29 Nov 1909.
- 5625: MOLUCCAS ISLANDS: Kayoa Id. (SE), S 3° W, 6 mi. (0° 07' N, 127° 28' E); 230 fms; gray mud and fine sand; 29 Nov 1909.
- 5626: MOLUCCAS ISLANDS: Kayoa Id. (SE), S 5° W, 6.7 mi. (0° 07' 30" N, 127° 29' E); 265 fms; gray mud and fine sand; 29 Nov 1909.
- 5648: CELEBES: Buton Strait, North Is. (S.), N 87° E, 10.2 mi. (5° 35' S, 122° 20' E); 559 fms; green mud; 16 Dec 1909.

- 5651: CELEBES: Gulf of Boni, Buginkali Pt., S 67° E, 21 mi. (4° 43' 50" S, 121° 23' 24" E); 700 fms; green mud; 17 Dec 1909.
- 5654: CELEBES: Gulf of Boni, Cape Tabako, N 17° E, 21.5 mi. (3° 42' S, 120° 45' 50" E); 805 fms; 18 Dec 1909.
- 5655: CELEBES: Gulf of Boni, Cape Tabako, N 7° E, 13 mi. (3° 34' 10" S, 120° 50' 30" E); 608 fms; gray mud and fine sand; 18 Dec 1909.
- 5656: CELEBES: Gulf of Boni, Olang Pt., N 67° W, 14.5 mi. (3° 17' 40" S, 120° 36' 45" E); 484 fms; gray mud; 19 Dec 1909.
- 5664: MACASSAR STRAIT: Kapoposang Lt., N 66° E, 3.8 mi. (4° 43' 22" S, 118° 53' 18" E); 400 fms; hard bottom; 28 Dec 1909.
- 5668: MACASSAR STRAIT: Mamuju Id. (E), S 31° E, 10.6 mi. (2° 28' 15" S, 118° 49' E); 901 fms; gray mud; 29 Dec 1909.
- 5694: CALIFORNIA: NW of San Nicolas Id. (33° 24' 36" N, 120° 12' 30" W); 640 fms; green mud; 26 Apr 1911.

APPENDIX II

DISCOVERY EXPEDITIONS STATIONS

"Discovery II" Stations

- 45: SOUTH GEORGIA ISLAND: off mouth of Cumberland Bay, 2.7 mi. S, 85° E, of Jason Lt.; 237–270 m; grey mud; 6 Apr 1926.
- 53: FALKLAND ISLANDS: East Falkland Id., Port Stanley; 0–2 m; 12 May 1926.
- 90: SOUTH AFRICA: False Bay, Simon's Town; 2–10 m; 10–12 Jul 1926.
- 145: SOUTH GEORGIA ISLAND: Stromness Harbor; 7 Jan 1927.
- 148: SOUTH GEORGIA ISLAND: off Cape Saunders (64° 20' S, 65° 01' W); 132–148 m; grey mud and stones; 9 Jan 1927.
- 160: FALKLAND ISLANDS: near Shag Rocks (53° 43' 40" S, 40° 57' W); 177 m; grey mud and stones; 7 Feb 1927.
- 190: ANTARCTICA: Palmer Archipelago, Bismark Strait; 93–130 fms; rocks and mud; 23 Mar 1927.
- 195: SOUTH SHETLAND ISLANDS: King George Island, Admiralty Bay; 391 m; 30 Mar 1927.
- 724: STRAITS OF MAGELLAN: Fortesque Bay; 0–5 m; 16 Nov 1931.
- 755: FALKLAND ISLANDS: off W coast of East Falkland Id. (51° 39' S, 57° 39' W); 77 m; 3 Dec 1931.
- 1564: FALKLAND ISLANDS: Marion Id.; 108–113 m; 7 Apr 1935.

"William Scoresby" Stations

- 25: SOUTH GEORGIA ISLAND: Undine Harbor; 18–27 m; mud and sand; 17 Dec 1926.
- 42: SOUTH GEORGIA ISLAND: off mouth of Cumberland Bay; 120–204 m; 7 Jan 1927.
- 85: FALKLAND ISLANDS: (52° 09' S, 58° 14' W); 79 m; sand and shell; 25 Mar 1927.
- 92: FALKLAND ISLANDS: (51° 58' 30" S, 65° 01' W); 143–145 m; 8 Apr 1927.
- 98: FALKLAND ISLANDS: (49° 54' 15" S, 60° 35' 30" W); 171–173 fms.
- 8196: FALKLAND ISLANDS: Falkland Plateau (52° 45' S, 62° 25.7' W); 126 m; 17 Jan 1932.
- 824: FALKLAND ISLANDS: (52° 94.5' S, 58° 27.25' W); 137–146 m; 19 Jan 1932.
- 841: FALKLAND ISLANDS: 110–120 m; 6 Feb 1932.
- 847: ARGENTINA: E of Port Santa Cruz; 56–84 m; 9 Feb 1932.
- 865: SOUTH ATLANTIC: between Patagonia and Falkland Ids. (50° 03' S, 64° 14' W); 126 m; 29 Mar 1932.

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10: SOUTH GEORGIA ISLAND: East Cumberland Bay; 26 m; 14
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